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ABSTRACT

Fifth in a series of studies examining reading discrepancies in Cleveland, Ohio public schools, this report analyzed the spring 1986-1987 reading data so that accurate and usable information and recommendations would be available to decision-makers for related planning, curriculum design, and implementation functions of the district. Students in grades 1-12 were given the Comprehensive Test of Basic Skills (CTBS) in the spring of 1986 and the California Achievement Test (CAT) in the spring of 1987. Race, sex, grade level, and adversely affected status subgroups of students were described and compared. Findings included declines in reading achievement for the average student, attributed to the replacement of the CTBS with the CAT; lower scores for the adversely affected, reversing a 5-year trend; Asian and Pacific Islander racial groups having the best average posttest and gain score of any racial group, with Hispanics and Blacks scoring among the bottom three racial groups; for every race and sex group, higher average daily attendance rate for those having better reading comprehension achievement scores; girls scoring higher than boys in reading comprehension; a significantly greater proportion of adversely affected students in the bottom one-third reading group, as well as Black and Hispanic students; a significant drop in average reading scores in grade 7; and reading comprehension gains during 1986-1987 were no greater in the original set of Project Perform schools than in comparison schools. (Fifteen figures, 10 tables of data, and four appendixes of computer-generated data are included.) (RS)

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CLEVELAND CITY SCHOOL DISTRICT

ANALYSIS OF READING DISCREPANCIES FOR 1986 - 1987

Prepared by

S. James Zafirau

for

The Cleveland City Schools

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ANALYSIS OF READING DISCREPANCIES FOR 1986-1987: CLEVELAND CITY SCHOOL DISTRICT

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May, 1988

EXECUTIVE SUMMARY
Analysis of Reading Discrepancies for 1986-1987

PURPOSE

The purpose of this study was to analyze and interpret spring, 1986-1987 citywide reading data so that accurate and usable information and recommendations would be available to decision-makers for related planning, curriculum design, and implementation functions of the district.

FINDINGS

1. The average student in the Cleveland City Schools during 1986-1987 did not maintain his/her reading achievement position relative to comparable students in a national sample. A major factor in the decline was changing the citywide test from the CTBS to the CAT, with newness and different norming standards.

2. During 1986-1987, the average reading comprehension score of the adversely affected students was 33.0 NCEs (21.0 percentile, for an average drop of 5.76 NCEs from the year before for those having both scores), with the non-adversely affected students averaging 47.6 NCEs (45.4 percentile, for an average drop of 5.22 NCEs). The adversely affected average score has increased every year from 1982 through 1986, until the 1986-1987 school year.

3. As in prior years, the Asian and Pacific Islander racial group had the best average posttest and gain score of any racial group during 1986-1987, with the Hispanics and blacks scoring among the bottom three race groups as in prior years.

4. In 1986-1987 it was again true, for each race and sex group, that those having better reading comprehension achievement scores also had a higher average daily attendance rate.

5. It was true again that girls scored higher in reading comprehension than boys. There were also proportionately more boys in the adversely affected group.

6. During 1986-1987, as in prior years, the bottom one-third reading group again had a significantly greater proportion of adversely affected students, as well as black and Hispanic students.

7. For 1986-1987 there continued to be a significant drop in average reading scores in the articulation grade 7. This result has been found in each of the school years since 1980-1981.

8. The Kennedy/Marshall, Collinwood, Adams/Rhodes, and Hay/West Tech Clusters were the only clusters having a greater proportion of their students placing in the top One-third group than in the bottom one-third during 1985-1986. Kennedy/Marshall and Collinwood also achieved this distinction during 1984-1985. No cluster achieved this for 1986-1987 (see explanation given in number 1), although the Kennedy Marshall cluster again had the greatest proportion of its students placing in the top one-third group.

9. In contrast to 1984-1985 and 1985-1986, the reading comprehension gains during 1986-1987 were not greater in the original set of Project Perform schools than in the comparison schools.

INTRODUCTION

This report is the fifth in a series of studies addressing reading discrepancies in the Cleveland Public Schools. It is prepared to respond to Required Action III 0002.2 of the Monthly Progress Report.

This fifth report will continue to analyze much of the same types of data and study similar issues as did the first four studies.

Desegregation has been implemented in all schools since September, 1980. Average daily membership (grades K-12) and racial distribution data for the school district for the five school years of 1980-1981, 1982-1983, 1984-1985, 1985-1986, and 1986-1987, which are the data bases for the mentioned reports, show:

School Year	Average Daily Membership	Percentages				
		Black	White	Hispanic	Asian	American Indian
1980-1981	83,488.50	66.9	28.3	3.9	.6	.3
1982-1983	77,233.70	68.3	26.5	4.1	.9	.3
1984-1985	74,134.52	68.9	25.5	4.4	1.0	.3
1985-1986	73,805.66	68.9	25.3	4.5	1.0	.3
1986-1987	72,447.35	69.4	24.6	4.7	1.1	.2

PURPOSE

The purpose of this study is to analyze and interpret 1986-1987 district-wide reading data so that accurate and usable information is available for the planning, curriculum design, and implementation functions of the district.

METHOD

This study is primarily a secondary analysis of citywide reading test data. This reading test data has resulted from the administration of CTBS (1985-1986) and CAT (1986-1987) reading tests in grades 1 through 12 (using appropriate forms and levels) during the spring semesters of 1986 and 1987.* This data was analyzed using various appropriate descriptive and inferential statistics programs contained in the Statistical Package for the Social Sciences (SPSS).

Race, sex, grade level, and adversely affected status subgroups of students were described and compared using, primarily, the normal curve equivalent (NCE) form of the CTBS and CAT Reading Comprehension subtest

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* These analyses were limited to those students having spring 1986 and spring 1987 reading data. Also, various analyses may have slightly different totals than these because other controlling variables (such as sex, race, grade level, etc.) might not be available for certain student records. It must be remembered throughout this study that these types of electronic data file shortfalls will and do result in some of the totals in various tables not being exactly equal.

scores. The NCE is the test score of choice because it is a true interval measure (unlike the percentile rank score which also has a minimum test value of 1, a maximum test value of 99, and a normed average value of 50), as well as the most precise reading measure available for the CTBS and CAT Reading Tests. Many statistics require interval data for their use (mean, t-test, ANOVA, etc.). Relatedly, averages (means) of NCE scores for the above subgroups were computed, and also compared using appropriate statistics.

Additional types of data manipulations were included because: a) they provided a parallel to those methods used in the separate Parity Study; b) they responded affirmatively to the recommendations of an external consultant concerning the format and methods used in reading evaluations in general; and c) they provided an interesting, complementary, useful, and in some cases a more readily understandable display of the reading data for the lay person.

FINDINGS

Introduction

The primary objective of this study was to analyze the 1986-1987 reading test data in order to gain further insights into what the causes of reading disparities might be within the Cleveland City Schools student population.

Causality. This study has not established the causes of reading improvement in the rigorous scientific sense. To do so would have

required the assignment of students into experimental and control groups, which would be contrary to the best interests of at least some students in the school district. Also required would have been establishing an experimental research design with controls put in place prior to this investigation. As a consequence, this study was conducted on an after the fact basis (i.e., ex post facto). Therefore any treatment of causality must proceed on a conceptual and rational basis alone, without benefit of an experimental research design.

General Analysis of Student Data

The Comprehensive Test of Basic Skills (CTBS) Reading Test and the California Achievement Test (CAT) are standardized, nationally normed tests of reading skills, available in various forms for use at various grade levels, grades 1-12. Most levels have vocabulary and reading comprehension subtests. The academic achievement measure of primary interest and use in this study is the reading comprehension subtest score.

The multi-variable student data set was created by taking files of citywide CTBS and CAT Reading Test scores for each student, and then by adding selected variables to each student's data record by linking a composite reading test file with other files such as the computerized active pupil record (APR) file, the adversely affected file, and the attendance file. If a student did not take a particular reading test or subtest, he/she was not included in any of the related reading comprehension analyses. Also, a student who did not have one of the other required indicators for a specific analysis (i.e., sex, race, grade level, etc.), was also excluded from that specific analysis, which accounts for the slight variations in row and column totals in various tables.

Selected Analyses for 1986-1987

A data base was created which included those students in the Cleveland City Schools having spring 1986 CTBS and spring 1987 CAT reading scores. From this file several special analyses were done.*

Relationship between average daily attendance rate and reading comprehension achievement level for 1986-1987. Students in the Cleveland City Schools were grouped in terms of their level of performance on the spring, 1987 CAT Reading Comprehension test. Three groups were formed. The bottom third group contained those students who scored at or below the 33rd percentile on the reading comprehension subtest, using national norms. The top third group contained those students scoring at or above the 67th percentile. The middle third group contained those students scoring between the bottom and top third groups. These top, middle, and bottom third groups were further broken down in terms of their race and sex subgroups, and compared and contrasted in terms of their attendance rates. Considering all students together, the top third reading group had a greater average daily attendance rate (ADA) than the middle third group, and the middle group had a greater ADA rate than the bottom third group. This was also true for each of the five racial groups, a trend also found in prior years. See Figure 1 and Table 1 for more detail.

Similar top to bottom thirds trends were also found for both male and female students. Top third reading achievement boys and girls

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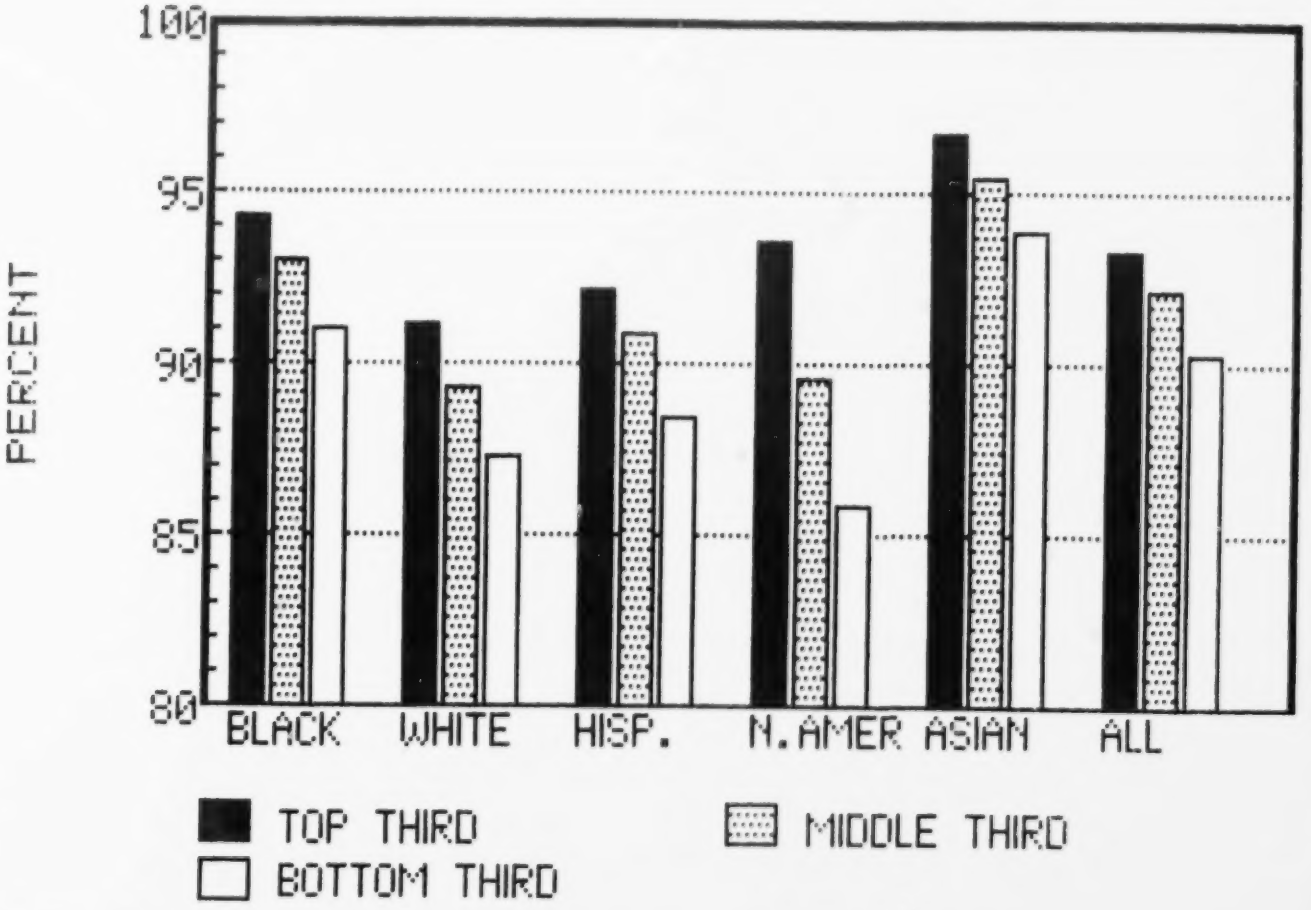
* These analyses were limited to those students having spring 1986 and spring 1987 reading data. Also, various analyses may have slightly different totals than these because other controlling variables (such as sex, race, grade level, etc.) might not be available for certain student records. It must be remembered throughout this study that these types of electronic data file shortfalls will and do result in some of the totals in various tables not being exactly equal.

Figure 1

Average Daily Attendance Rates (in Percent) by Race and by CAT Reading Comprehension Posttest Based Student Achievement Groups (Bottom, Middle, and Top Thirds) in the 1986-1987 Cleveland City Schools*



* This student sample is limited to those students having reading test scores for both the spring of 1986 and the spring of 1987.

Table 1

Average Daily Attendance Rates (in Percent) by Race and by CAT Reading Comprehension Posttest Based Student Achievement Groups (Bottom, Middle, and Top Thirds) in the 1986-1987 Cleveland City Schools*

Race	Bottom Third Reading Group	Middle Third Reading Group	Top Third Reading Group	All Students
Black	91.0	93.1	94.4	
White	87.4	89.3	91.2	
Hispanic	88.5	90.9	92.2	
Native American (Indian or Eskimo)	85.9	89.6	93.7	
Asian or Pacific Islander	93.9	95.5	96.8	
All Students	90.3	92.2	93.4	91.8

* This student sample is limited to those students having reading test scores for both the spring of 1986 and the spring of 1987.

were found to have a higher ADA rate than bottom third students, and this was found true in top to bottom third comparisons for all racial groups within each sex, a trend also found in prior years. See Figure 2 and Table 2 for more statistical detail.

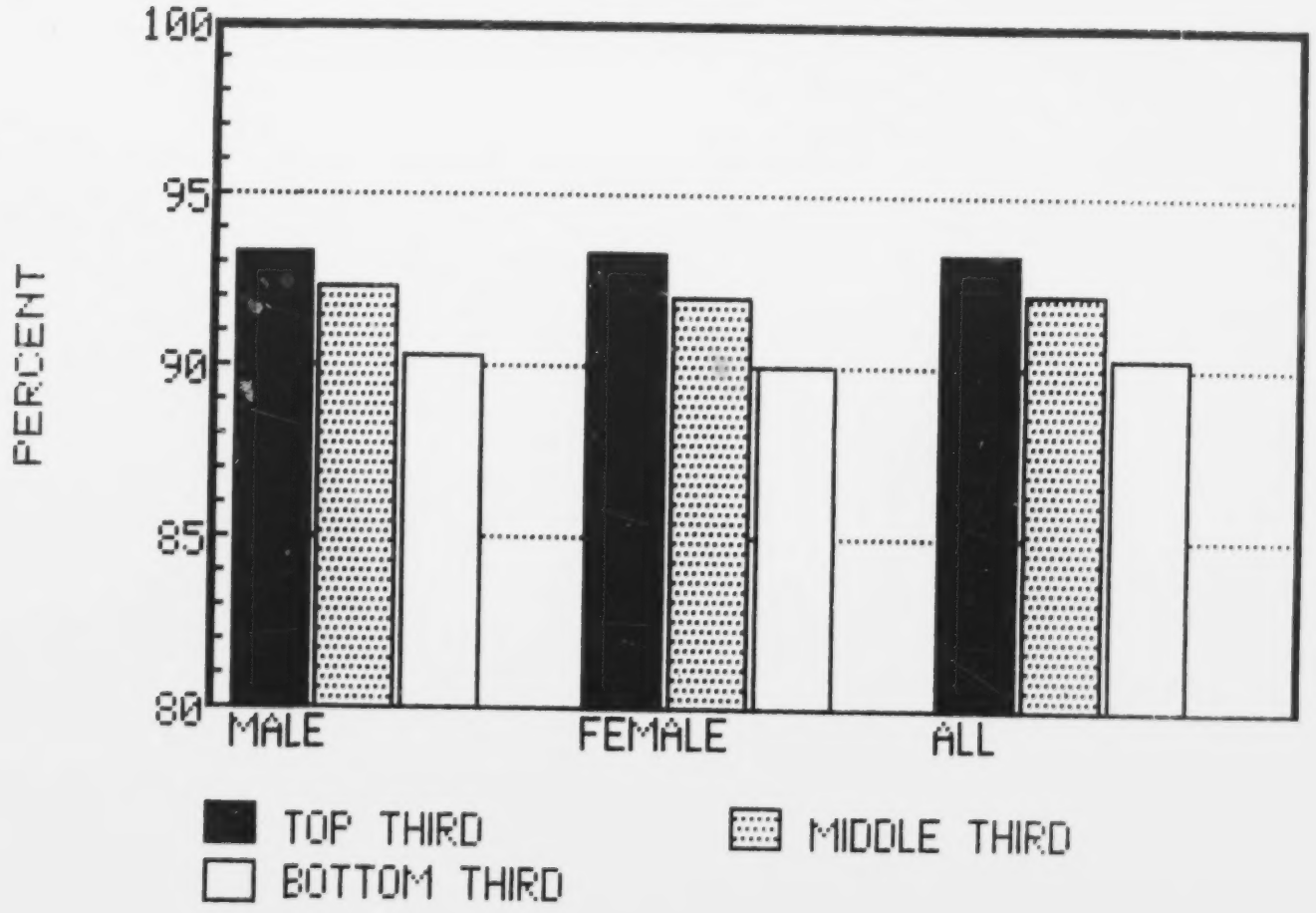
Asian and Pacific Islanders clearly had the highest ADA rate of any racial group, as was also true in 1984-1985 and in 1985-1986. Blacks were the only other racial group which consistently had an ADA rate above the overall average, a trend also found for 1985-1986. Whites had the lowest overall ADA rate (as was also the case in 1984-1985 and 1985-1986) of any reading group sorted by race. Sex based bottom, middle, and top reading achievement groups broken down by race had fairly comparable ADA rates. This trend was also found in 1985-1986. See Figures 1 and 2, and Tables 1 and 2 for more statistical detail.

Insert Figures 1 and 2, and Tables 1 and 2 here

Various other comparisons between 1986-1987 bottom, middle, and top one-third reading comprehension achievement student groups. A consultant to the Office of School Monitoring and Community Relations (OSMCR) has suggested that bottom, middle, and top one-third reading comprehension achievement student groups be identified, described, and compared. These as well as other useful analyses, have been done selectively in the various analytic sections of this report. The present section gives additional information describing and contrasting the top, middle, and bottom one-third reading groups.

Figure 2

Average Daily Attendance Rates (in Percent) by Sex and Race within Reading Comprehension Posttest Based Student Achievement Groups (Bottom, Middle and Top Thirds) in the 1986-1987 Cleveland City Schools*



* This student sample is limited to those students having reading test scores for both the spring of 1986 and the spring of 1987.

Table 2

Average Daily Attendance Rates (in Percent) by Sex and Race within Reading Comprehension Posttest Based Student Achievement Groups (Bottom, Middle and Top Thirds) in the 1986-1987 Cleveland City Schools*

Sex	Race	Bottom Third Reading Group	Middle Third Reading Group	Top Third Reading Group	All Students
Male		90.4	92.4	93.3	
	Black	91.3	93.2	94.3	
	White	87.3	89.7	91.4	
	Hispanic	87.9	91.0	92.9	
	Native American	85.8	91.3	94.2	
	Asian	92.9	95.5	97.0	
Female		90.0	92.1	93.4	
	Black	90.6	93.0	94.4	
	White	87.5	88.9	91.0	
	Hispanic	89.2	90.8	91.4	
	Native American	86.2	88.1	93.3	
	Asian	95.3	95.6	96.6	
All Students		90.3	92.2	93.4	91.8

* This student sample is limited to those students having reading test scores for both the spring of 1986 and the spring of 1987.

A much greater proportion of the 1986-1987 adversely affected students, in contrast to the non-adversely affected students, were in the bottom one-third reading group. More than one-half (in 1986-1987 it was 73.9%) of all adversely affected students were in the bottom one-third reading group, compared with less than one-fourth (34.9%) of the non-adversely affected student group. These trends were also true for 1985-1986, and are consistent with other information presented elsewhere on adversely affected students. These findings are displayed in Figure 3 and Table 3.

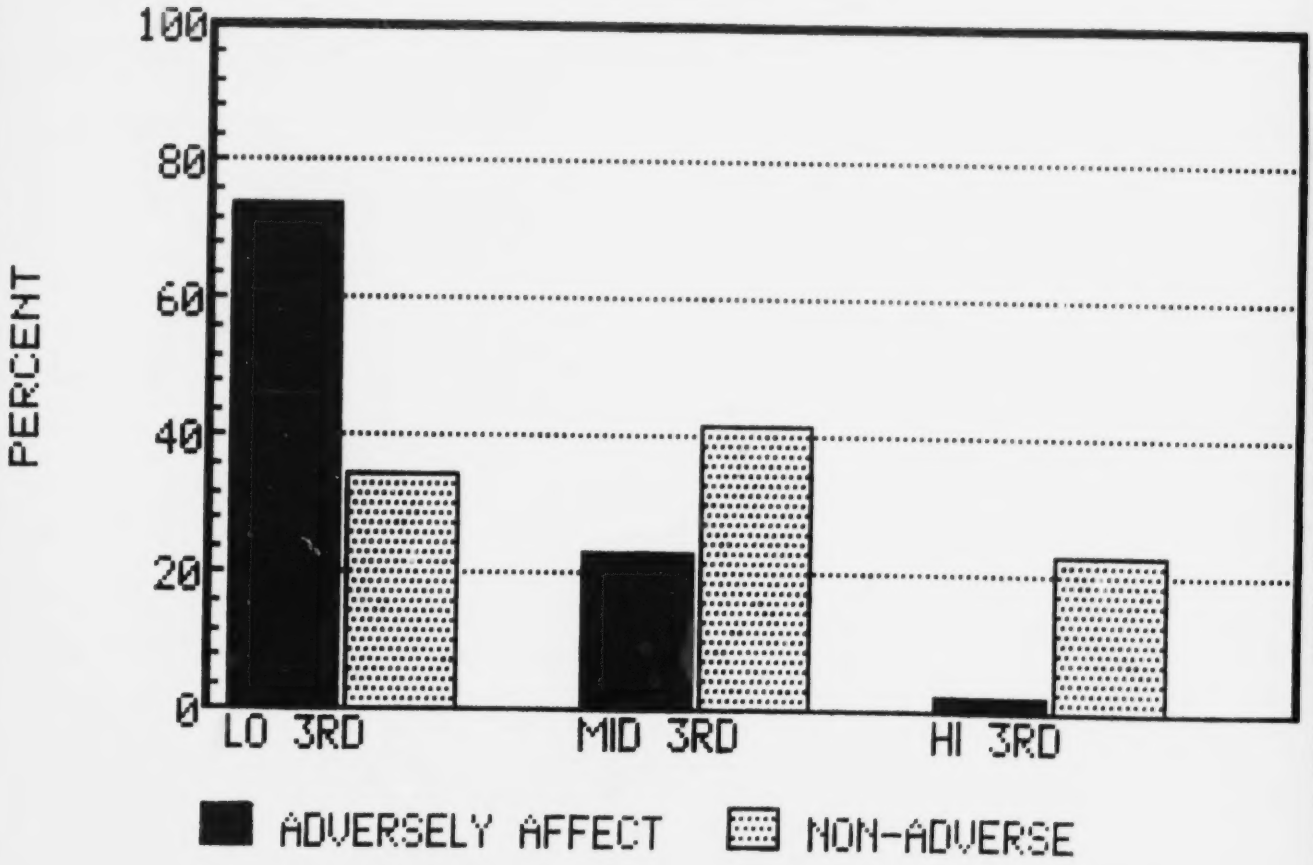
Insert Figure 3, and Table 3 here

With respect to race, a significantly greater proportion of the black students were found in the lowest one-third (38.9%) than white students (30.1%)--a result also found for 1984-1985 and 1985-1986. Likewise in 1986-1987, a lesser proportion of blacks (19.9%) were found in the top one-third group than were whites (29.9%), as also was found in 1984-1985 and 1985-1986. It was again found for 1986-1987 that a greater proportion of Hispanic and black students were in the bottom one-third reading group than for any other racial group, and that the Asians again had the greatest proportion of their total in the top-third. These facts are displayed in Figure 4 and Table 4.

Insert Figure 4, and Table 4 here

Figure 3

The Percent of 1986-1987 Adversely Affected and Non-Adversely Affected Students Achieving in the Bottom, Middle, and Top Third Reading Comprehension Performance* Groups



* Based on the national norms for the California Achievement Test (CAT).

Table 3

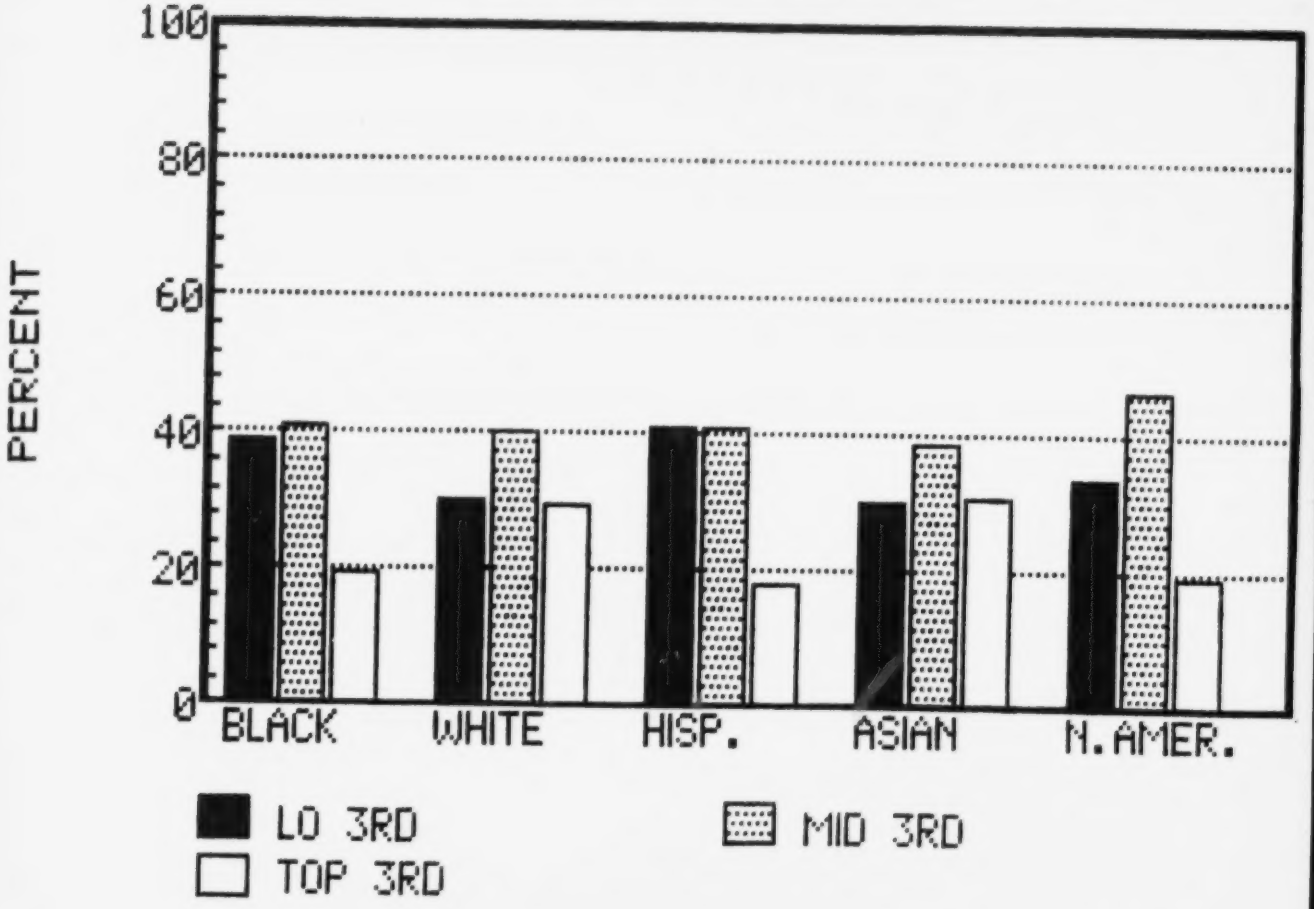
The Percent of 1986-1987 Adversely Affected and Non-Adversely Affected Students Achieving in the Bottom, Middle, and Top Third Reading Comprehension Performance* Groups

Group	Adversely Affected	Non-Adversely Affected
Bottom Third	73.9%	34.9%
Middle Third	23.3%	41.8%
Top Third	2.8%	23.2%

* Based on the national norms for the California Achievement Test (CAT).

Figure 4

The Percent of 1986-1987 Students, by Race, Achieving in the Bottom, Middle, and Top Third Reading Comprehension Performance* Groups



* Based on the national norms for the California Achievement Test (CAT).

Table 4

The Percent of 1986-1987 Students, by Race, Achieving in the Bottom, Middle, and Top Third Reading Comprehension Performance* Groups

Race Group	Low Third	Middle Third	Top Third
Black	38.9	41.2	19.9
White	30.1	40.1	29.9
Hispanic	41.0	41.0	17.9
Asian	30.4	38.7	30.9
Native American	33.6	46.7	19.7

* Based on the national norms for the California Achievement Test (CAT).

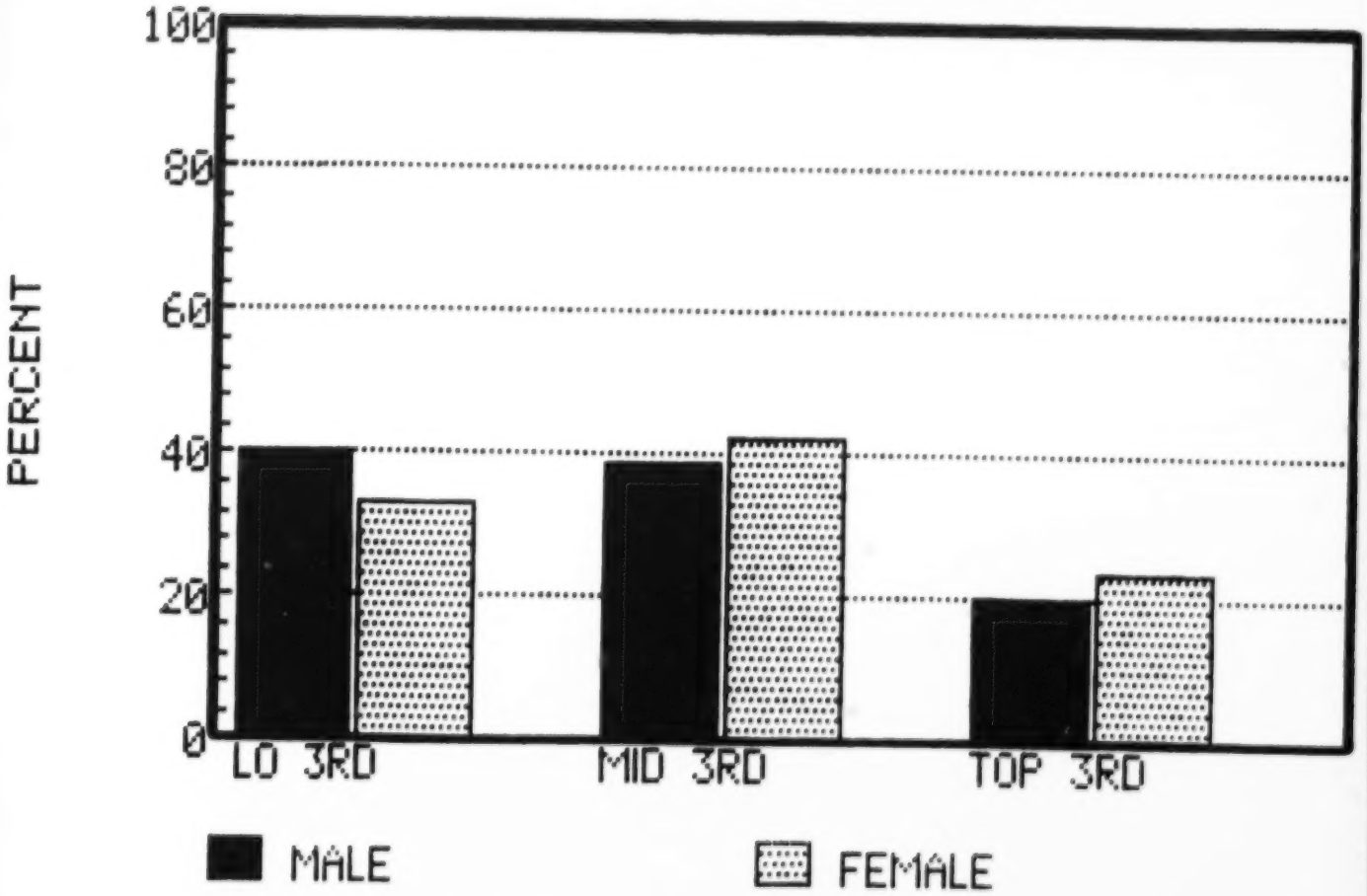
As found in the 1984-1985 and 1985-1986 counterpart analyses, there was a significantly greater proportion of males than females in the bottom one-third group in 1986-1987, and significantly more girls than boys in the top one-third group. See Figure 5 and Table 5 for additional representation of these facts. Although their was a greater proportion in the bottom one-third group than in the top one-third group for all male racial groups, there were some race based differences for females. For the Asian, white, and native American female racial groups there were proportionately more females in the top one-third reading group than in the bottom one-third reading group for 1986-1987, as was true in 1985-1986. This was not true for black and Hispanic female groups. Representation of these facts are contained in Figure 6 and Table 6. These findings show that more teaching/learning and support work needs to be done to raise the reading achievement of males, and of black and Hispanic students, and is consistent with other prior research on this topic.

Insert Figures 5 and 6, and Tables 5 and 6 here

For those in the top one-third group in terms of their spring, 1986 reading comprehension score (posttest), they gained significantly more in their reading achievement during the year than did those who were in the bottom one-third posttest group. It is quite comprehensible to find that those who gained more in reading achievement also ended up at a higher reading achievement level.

Figure 5

The Percent of 1986-1987 Male and Female Students
Achieving in the Bottom, Middle, and Top Third
Reading Comprehension Performance* Groups



* Based on the national norms for the California Achievement Test (CAT).

Table 5

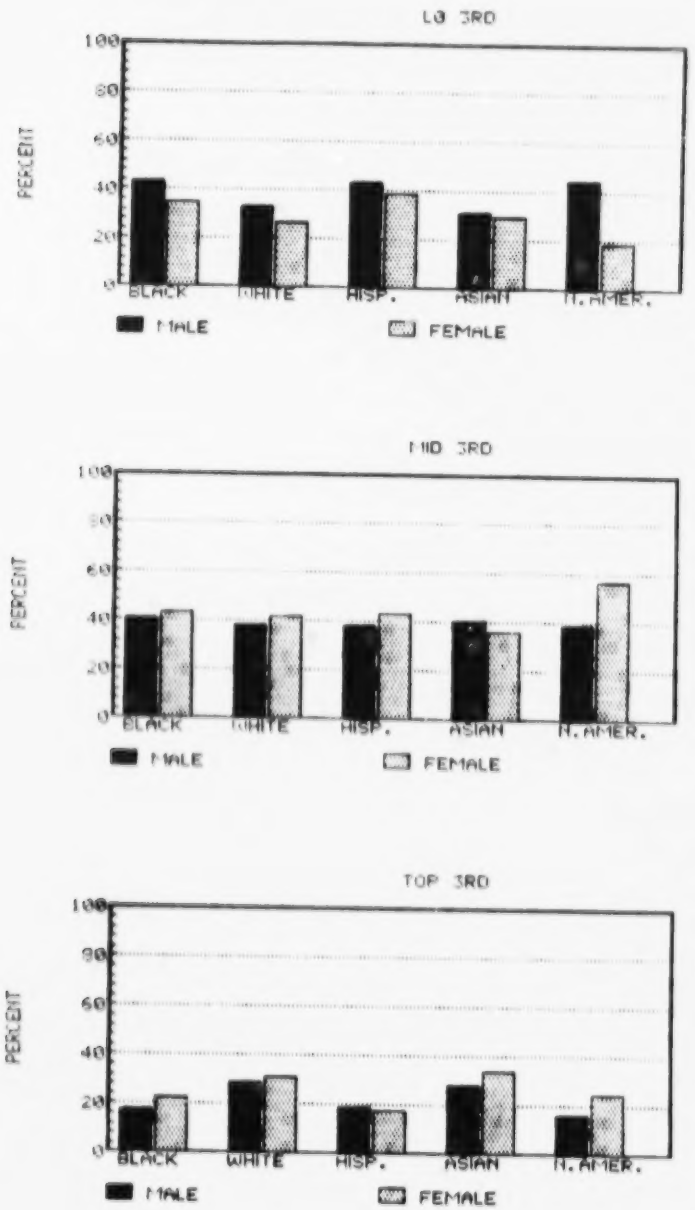
The Percent of 1986-1987 Male and Female Students Achieving in the Bottom, Middle, and Top Third Reading Comprehension Performance* Groups

Sex Group	Low Third	Middle Third	Top Third
Male	40.6	39.1	20.3
Female	33.1	42.8	24.1

* Based on the national norms for the California Achievement Test (CAT).

Figure 6

The Percent of 1986-1987 Male and Female Students Achieving in the Bottom, Middle, and Top Third Reading Comprehension Performance* Groups



* Based on the national norms for the California Achievement Test (CAT).

Table 6

The Percent of 1986-1987 Male and Female Students Achieving in the Bottom, Middle, and Top Third Reading Comprehension Performance* Groups

Race Group	Low Third		Middle Third		Top Third	
	Male	Female	Male	Female	Male	Female
Black	43.1	34.7	39.4	43.0	17.5	22.3
White	32.8	27.0	38.3	42.0	28.8	31.0
Hispanic	42.9	39.1	38.5	43.5	18.6	17.3
Asian	31.0	29.7	40.7	36.1	28.3	34.2
Native American	44.9	18.9	39.1	56.6	15.9	24.5

* Based on the national norms for the California Achievement Test (CAT).

To this point in this present 1986-1987 analysis, organizational dimensions have only been lightly touched. There are significant differences between building types, grade levels, and organizational clusters with respect to student reading comprehension achievement.

As in 1984-1985 and 1985-1986, the elementary schools had the greatest proportion of students in the top one-third group vs. the bottom one-third group. Elementary schools had 26.1% of their students in the top one-third group vs. 32.9% in the bottom one-third group, followed by magnet and special schools with 25.5% vs. 29.3%; high schools with 16.1% vs. 42.9%, and intermediate schools with 14.6% vs. 46.3%. Figure 7 and Table 7 present greater graphic and statistical detail.

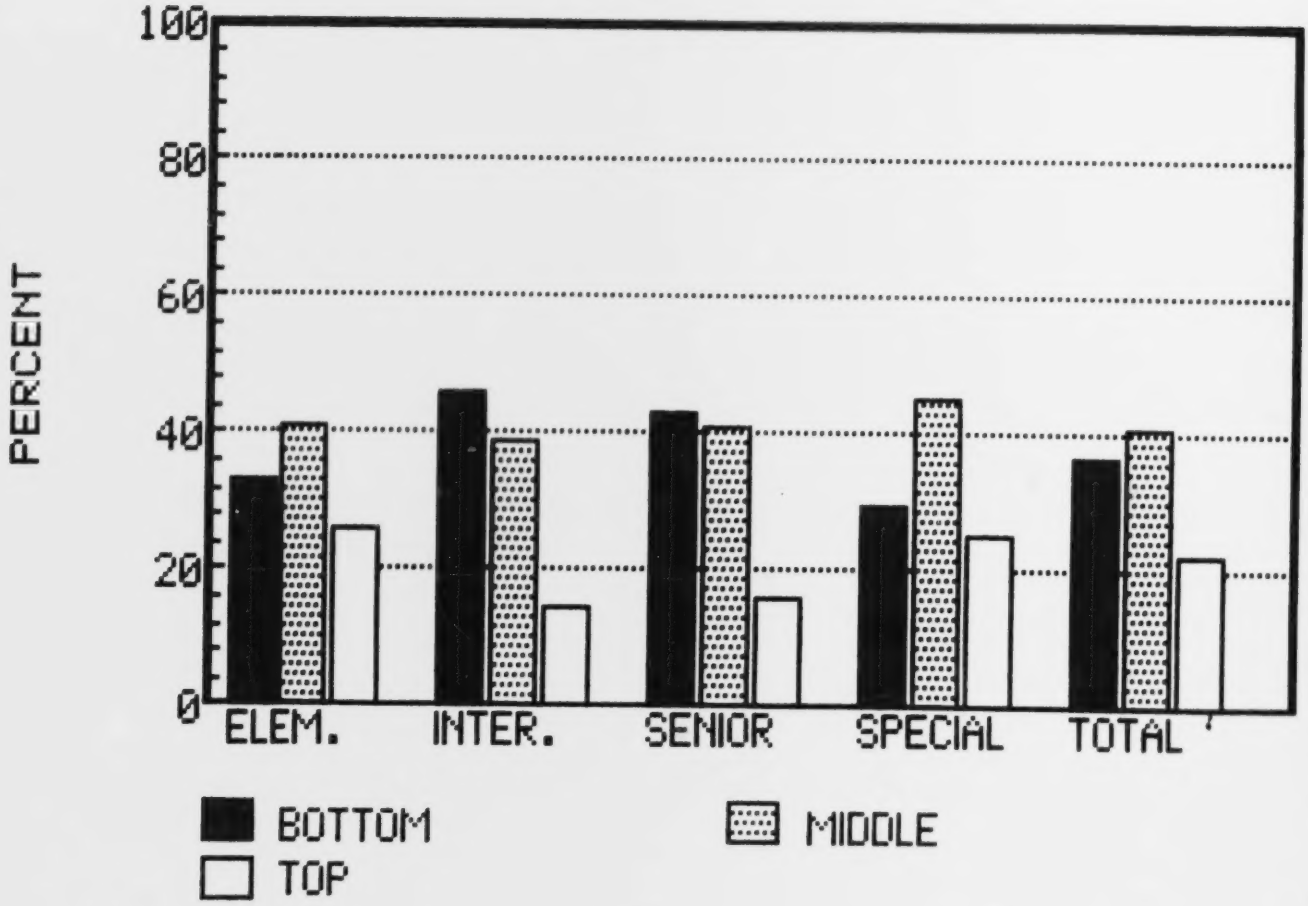
Insert Figure 7, and Tables 7 here

A further examination of one-third groups was done by grade level. A greater proportion of students were in the top one-third reading group than in the bottom one-third reading group at grade one, as in 1985-1986. In all other grades during 1986-1987, a greater proportion of students scored in the bottom third than in the top third. The worst results came in grade seven. In grade seven 42.2% of the students scored in the bottom one-third, with only 13.8% scoring in the top one-third in terms of reading comprehension. Graphic and statistical presentation of these facts are contained in Figure 8 and Table 8.

Insert Figure 8, and Tables 8 here

Figure 7

The Percent of 1986-1987 Students by
Building Type Achieving in the Bottom, Middle, and Top
Reading Comprehension Performance* Groups



* Based on the national norms for the California Achievement Test (CAT).

Table 7

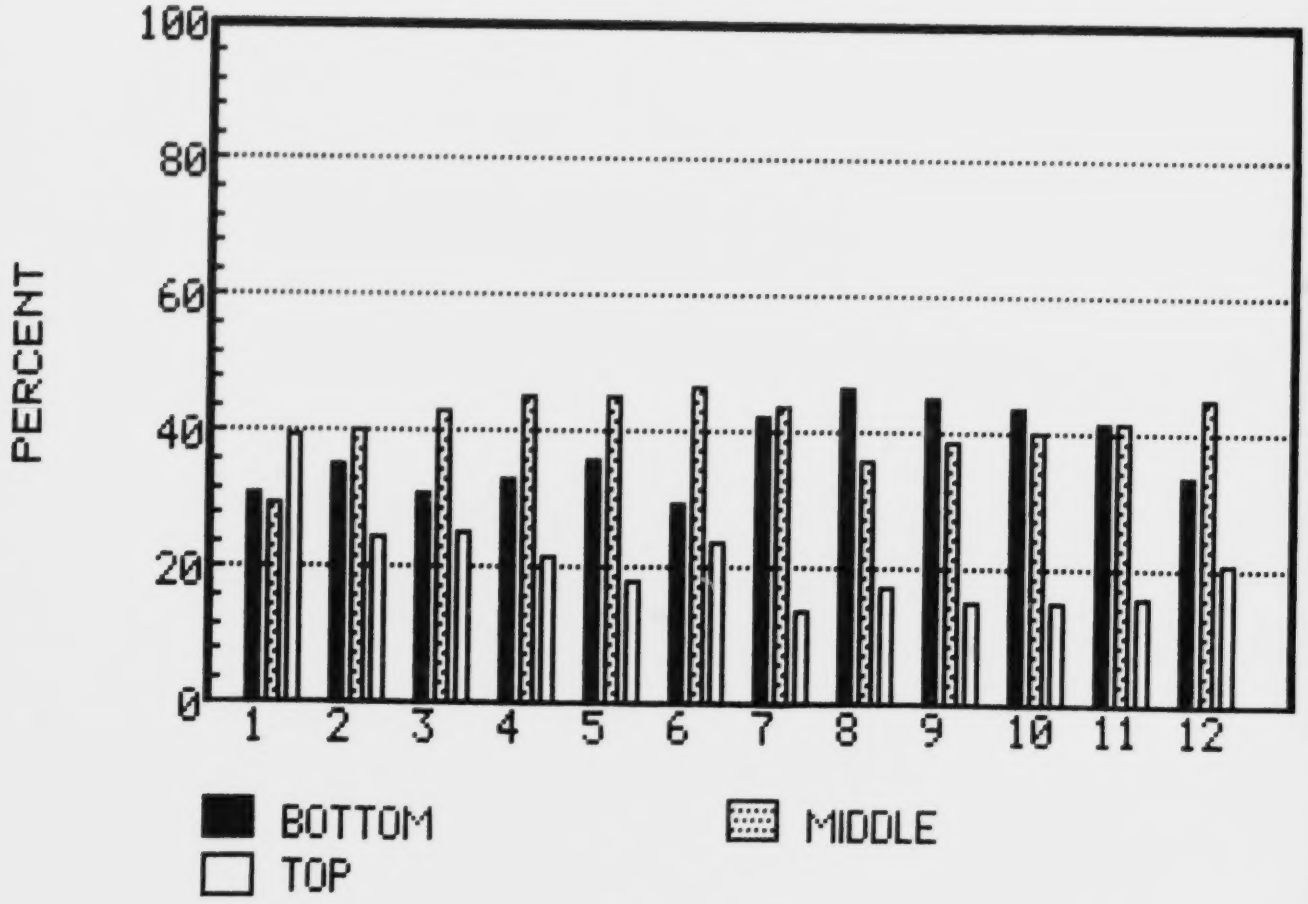
The Percent of 1986-1987 Students by Building Type Achieving in the Bottom, Middle, and Top Reading Comprehension Performance* Groups

Building Level	Bottom Group	Middle Group	Top Group
Elementary Schools	32.9	41.0	26.1
Intermediate Schools	46.3	39.1	14.6
Senior High Schools	42.9	41.0	16.1
Magnet/Special Schools	29.3	45.2	25.5
Total	36.9	40.9	22.2

* Based on the national norms for the California Achievement Test (CAT).

Figure 8

The Percent of 1986-1987 Students by
Grade Level Achieving in the Bottom, Middle and Top Third
Reading Comprehension Performance* Groups



* Based on the national norms for the California Achievement Test (CAT).

Table 8

The Percent of 1986-1987 Students by
Grade Level Achieving in the Bottom, Middle and Top Third
Reading Comprehension Performance* Groups

Grade Level	Bottom Group	Middle Group	Top Group
1	31.1	29.5	39.3
2	35.0	40.5	24.5
3	30.8	43.5	25.6
4	33.1	45.1	21.7
5	36.2	45.5	18.3
6	29.8	46.5	23.7
7	42.2	44.0	13.8
8	46.7	36.1	17.3
9	45.5	39.0	15.5
10	44.0	40.7	15.3
11	41.7	42.0	16.3
12	33.7	45.3	21.0
Total	36.9	40.9	22.2

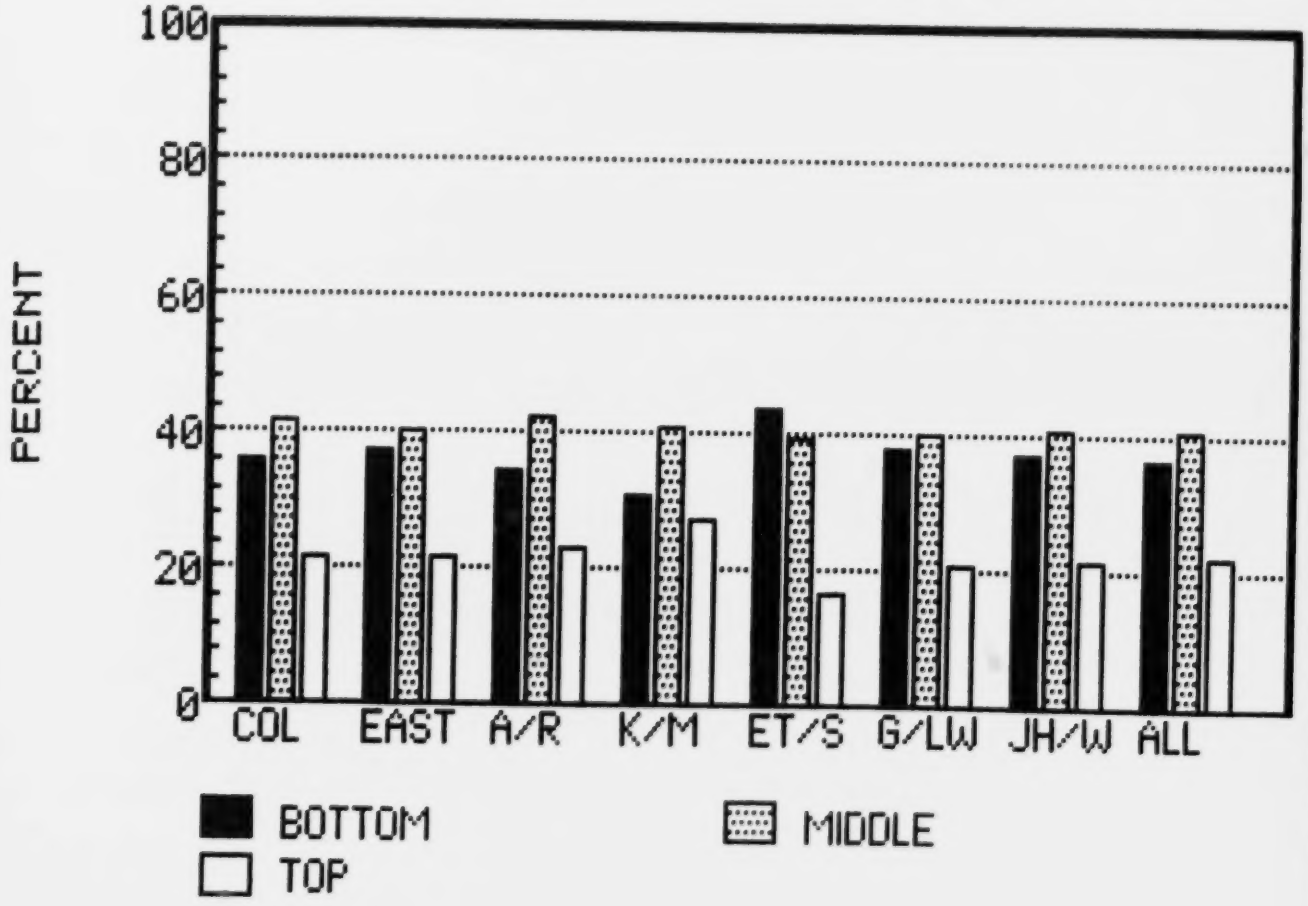
* Based on the national norms for the California Achievement Test (CAT).

Although it is interesting and useful to view reading achievement on a citywide basis by race, sex, adversely affected status, building type, grade level, and the like, it is equally interesting and useful to examine differences between organizational clusters and buildings. It has been shown in preceding analyses that there are significant differences in reading achievement between schools, and within each building level, as well as between building levels by school (See Appendix A). In this present analysis it was found that there is also a significant difference between the geographically based (residential zone) organizational clusters in terms of the proportion of students falling within the bottom, middle, and top reading achievement groups. The Kennedy/Marshall cluster, as was also true for 1984-1985 and 1985-1986, had the greatest proportion of its students placing in the top one-third group and the least proportion of its students in the bottom one-third group (2,374 for 27.5% vs. 2,691 for 31.1%), of any school district administrative cluster. In descending order of the proportion of their students scoring in the top-third on the spring, 1987 reading test the clusters were: Kennedy/Marshall, Adams/Rhodes, East, John Hay/West Tech, Collinwood, Glenville/Lincoln-West, and East Tech/South. For the first time, each of the clusters had proportionately more students in the bottom one-third reading group than in the top third. See Figure 9, Table 9, and Appendix B for more statistical detail.

Insert Figure 9, and Tables 9 here

Figure 9

The Percent of 1986-1987 Students by
Administrative Cluster Achieving in the Bottom, Middle and Top Third
Reading Comprehension Performance* Groups



* Based on the national norms for the California Achievement Test (CAT).

Table 9

The Percent of 1986-1987 Students by Administrative Cluster Achieving in the Bottom, Middle and Top Third Reading Comprehension Performance* Groups

Cluster	Bottom Group	Middle Group	Top Group
Collinwood	36.3	42.1	21.7
East	37.6	40.4	22.0
Adams/Rhodes	34.5	42.4	23.1
Kennedy/Marshall	31.1	41.4	27.5
East Tech/South	44.2	39.3	16.5
Glenville/Lincoln-West	38.4	40.2	21.4
John Hay/West Tech	37.3	40.8	21.8
Total	36.9	40.9	22.2

* Based on the national norms for the California Achievement Test (CAT).

These types of findings suggest that strategies for reading improvement be focused on organizational divisions and units such as building level, grade level, organizational clusters, and specific school buildings, as well as on certain student types based on such student characteristics as race, sex, and adversely affected status.

Using Parity Study criteria for 1986-1987 school year data analyses. Compliance with the court order resulted in a Parity Study initially designed by a consultant and carried out by school district personnel. The subsequent Parity Studies focused specifically on those students who scored at or below the 33rd percentile in contrast to those who scored above 33rd percentile. Although such dichotomization does mask differences in the distribution of scores within each of these two groups, the dichotomization possibly does enhance the broader understandability of the results due to the simplification. This grouping system was used on the pretest and posttest data for 1986-1987. Those students who scored at or below the 33rd percentile on both the pretests and posttests, as well as those who scored above the 33rd percentile on both of these tests represented no change. Therefore, (a) those moving from at or below the 33rd percentile to above it were identified, counted and contrasted with those (b) moving from above, to at or below, by both school level and type, and by school building within school type category.

It was found that the proportion of those students moving from below to above the 33rd percentile in contrast to the proportion moving from above to below differed between the building types and levels, with intermediate schools (formerly junior high school grades 7 and 8) having the least favorable outcome in this regard. The percent moving from above to below and below to above was 73.5% vs. 26.5% for elementary schools,

86.7% vs. 13.3% for intermediate schools, 72.7% vs. 27.3% for senior high schools, and 61.0% vs. 39.0% for magnet and special schools, respectively. These results: (a) differed from those obtained for the 1983-1984 school year where senior high school students did most favorably, with special schools and institutions being the only types of schools where more students moved from above to below than from below to above the cut score; (b) were similar to the 1984-1985 school year results where junior high school (now grade 7 and 8 intermediate school) students did much more unfavorably than in any of the other three building types; and (c) differed from those obtained for 1985-1986, where the most favorable outcome occurred at the elementary school level, becoming less favorable with each following building level, and with the results of the magnet/special schools being least favorable of all. Overall for 1984-1985, 48.2% of the students citywide moved in a positive direction in contrast to 50.2% moving in a negative direction across the cut score. For 1985-1986 the overall outcome was somewhat more favorable at 50.7% of the students moving across the cut score in a positive direction in contrast to 49.3% moving in a negative direction across the cut score. For 1986-1987, only 24.8% moved in a positive direction, in contrast to 75.2% moving in a negative direction. The reduced percent moving in a positive direction can be explained in part by the fact that the test used citywide changed from the CTBS in spring 1986 to the newer CAT in spring 1987, with attendant new test norming standards and lesser teacher and student familiarity with the newly used CAT reading test.

Significant differences were found between schools, and within every building type. If we look at all students moving across the 33rd percentile cut score from the spring 1986 pretest to the spring 1987

posttest, building by building, it is possible to identify those more exemplary buildings with the highest net reading performance (change) and those with the lowest in net performance. Of the one-hundred and twenty-seven (127) schools meeting the criterion (i.e., having more than five students moving either way across the cut score), not one school during the 1986-1987 school year had a net positive result of more than sixty percent of all such transition students moving from below to above the cut score (in contrast to twenty-seven schools during 1986-1987). Two elementary schools (Bolton and M.M. Bethune) and one senior high school (Collinwood) achieved this positive result in both the 1984-1985 and 1985-1986 school years, but not in 1986-1987. In 1986-1987, however, Bolton Elementary School had the fourth highest percent (49.1%) of all its transition students moving from below the thirty-third percentile cut score to above. This ranked just behind Riverside Elementary School at 53.3%, Aviation High School at 50.0%, and Clark Elementary School at 49.3%.

In contrast, all but seven of the one-hundred and twenty-seven schools had over sixty percent of all such transition students moving in a negative direction, from above the cut score to below the cut score. Two elementary schools (J.F. Landis and R.G. Jones), three junior high schools (Willson, W. Young, and F.D. Roosevelt), and one special school (Jane Addams) achieved this unfavorable distinction for the 1984-1985, 1985-1986, and 1986-1987 school years.

The seven schools which did not achieve this unfavorable distinction during 1986-1987 were four of the eighty-five elementary schools (Riverside at 46.7%, Clark at 50.7%, Bolton at 50.9%, and Louis Agassiz at 59.7%), and three of the seven magnet/special schools (Aviation

at 50.0%, Cleveland School of Science at 52.8%, and Health Careers at 54.0%). No intermediate school or high school is contained in this more favorable 1986-1987 reading progress group of schools. The change from the citywide use of the CTBS reading test in 1985-1986 to citywide use of the CAT reading test in 1986-1987 almost certainly accounts for some of the overall less favorable results for 1986-1987.

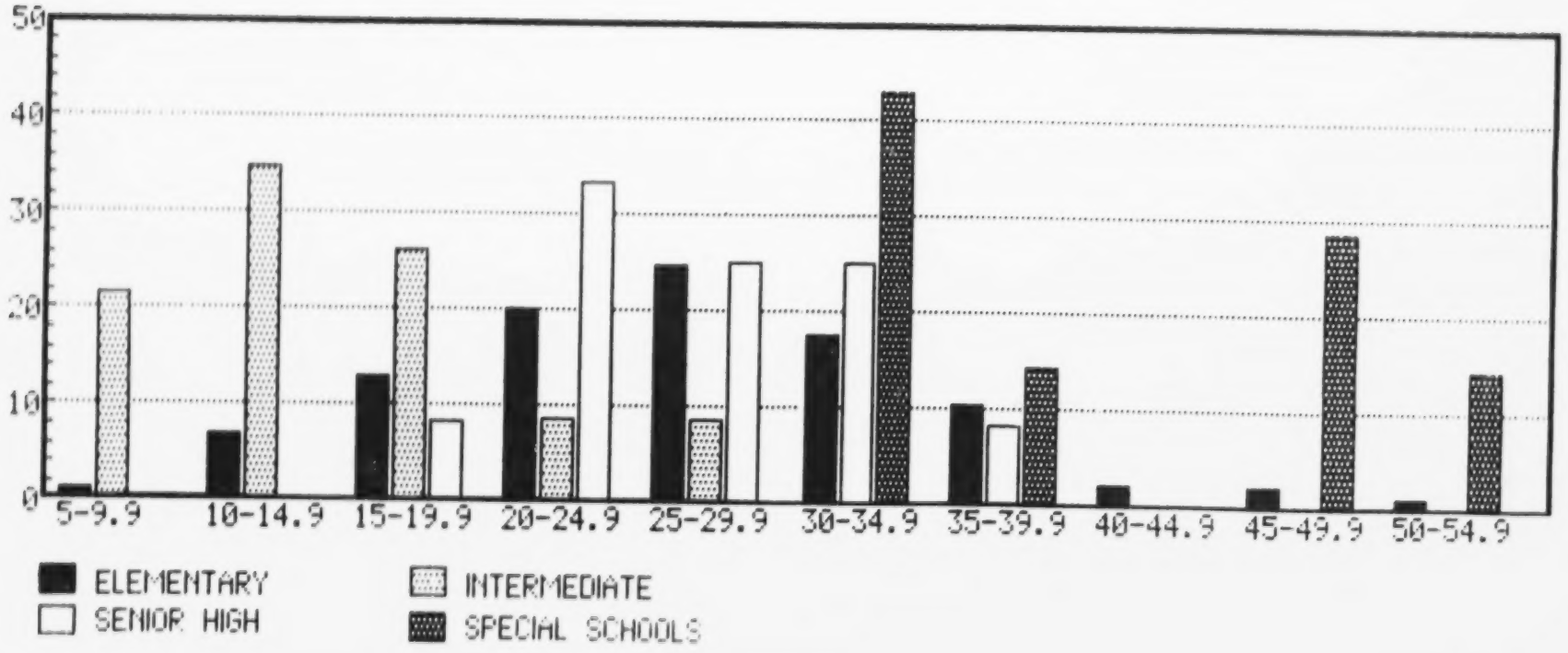
These results are compiled and presented by each building type in Figures 10 and 11, and Table 10. Every school in the school system participating in citywide testing is individually identified and described in these terms in Appendix A. These individual school identities and descriptions can be used to plan reading comprehension achievement improvements in and for schools most in need. Those setting curriculum priorities in and for those schools can review the emphasis and resources given reading and other language arts coursework in view of these findings. Good language skills are basic to any educational success.

Insert Figures 10 and 11, and Table 10 here

Project perform during the 1986-1987 school year. Overall, the reading comprehension change scores were not significantly different ($p \leq .01$) between students in the original Project Perform elementary and intermediate schools and students in the remaining schools at those same levels (-5.72 NCEs vs. -5.05 NCEs, and -7.03 NCEs vs. -7.32 NCEs, respectively). This suggests that the various activities in Project Perform schools during 1986-1987 did not result in a greater overall school effectiveness in terms of student reading achievement gain scores.

Figure 10

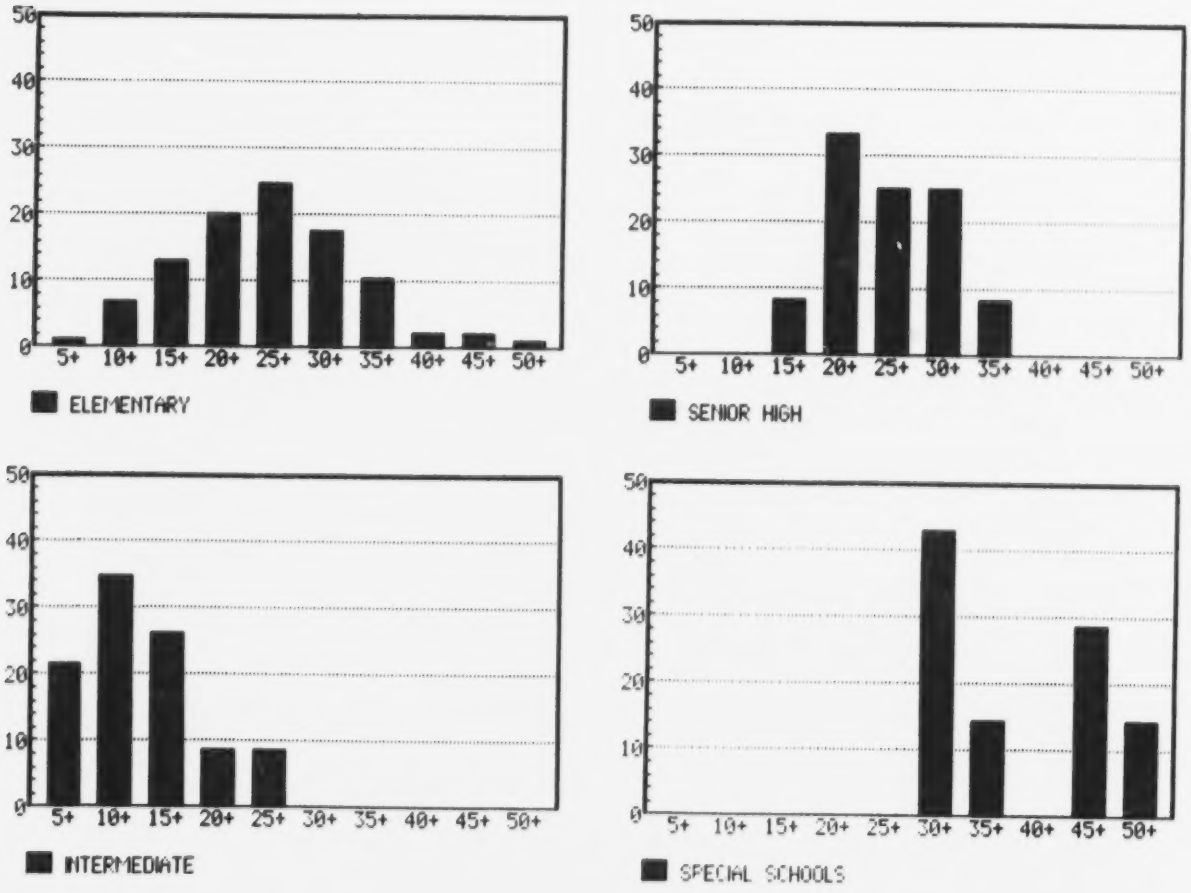
Percent (and Number*) of 1986-1987 Cleveland Public Schools by Building Type (Vertical), Categorized by the Percent of the Total Transition Students** in the School Who Moved Across the 33rd Percentile Cut Score in a Positive Direction (Horizontal)



* This student sample is limited to those students having reading test scores for both the spring of 1986 and the spring of 1987.

Figure 11

Percent (and Number*) of 1986-1987 Cleveland Public Schools by Building Type (Vertical), Categorized by the Percent of the Total Transition Students** in the School Who Moved Across the 33rd Percentile Cut Score in a Positive Direction (Horizontal)



* This student sample is limited to those students having reading test scores for both the spring of 1986 and the spring of 1987.

Table 10

Percent (and Number*) of 1986-1987 Cleveland Public Schools by Building Type, Categorized by the Percent of the Total Transition Students** in the School Who Moved Across the 33rd Percentile Cut Score in a Positive Direction

School Building Categorization Based on the Percent of the Transition** Students in the School Who Moved Positively Across the Cut Score (33rd Percentile)	Percent of Schools (with Number of Schools)			
	Elementary	Intermediate	Senior High	Special Schools
50 - 54.9%	1.2% (1)			14.3% (1)
45 - 49.9%	2.4% (2)			28.6% (2)
40 - 44.9%	2.4% (2)			
35 - 39.9%	10.5% (9)		8.3% (1)	14.3% (1)
30 - 34.9%	17.6% (15)		25.0% (3)	42.9% (3)
25 - 29.9%	24.7% (21)	8.7% (2)	25.0% (3)	
20 - 24.9%	20.0% (17)	8.7% (2)	33.3% (4)	
15 - 19.9%	12.9% (11)	26.1% (6)	8.3% (1)	
10 - 14.9%	7.1% (16)	34.8% (8)		
5 - 9.9%	1.2% (1)	21.7% (5)		
Totals 20 - 84.9%	100.0% (85)	100.0% (23)	100.0% (12)	100.0% (7)

* Schools having a combined total of less than five students moving across the 33rd percentile cut score in either direction were omitted. Using this criteria none of the one hundred and twenty-seven schools was omitted in 1986-1987.

** Transition students are the sum total of all students who, from pretest to posttest, moved from above to below or below to above the 33rd percentile (cut score). All of the remaining students had both pretest and posttest scores either: a) below the 33rd percentile, or b) above the 33rd percentile. The citywide reading test changed from the CTBS in 1985-1986 to the CAT in 1986-1987, with a resulting overall decline in the citywide reading test scores.

This contrasts with the findings for 1985-1986. It should be noted, however, that this is but one indicator of overall school effectiveness.

The average reading comprehension pretest and posttest scores for students in the original Project Perform elementary schools, in contrast to the remaining elementary schools students, were slightly lower (52.3 NCEs vs. 53.6 NCEs, and 47.3 NCEs vs. 49.4 NCEs, respectively), as were the average pretest and posttest scores for the original Project Perform intermediate high school students (49.0 NCEs vs. 51.2 NCEs, and 40.8 NCEs vs. 43.1 NCEs, respectively), a finding similar to that for 1985-1986.

The elementary school level student body represented by this test data in the Project Perform schools is 52.3% male and 47.7% female, in contrast to 51.9% male and 48.1% female in the remaining schools. In the Project Perform schools at the intermediate building level (grades 7 and 8), there were 56.3% males and 43.7% females. In the remaining schools at the intermediate school level, there were 52.8% males and 47.2% females. This information is graphically displayed in Figure 12.

Race composition comparisons between Project Perform and non-Project Perform elementary schools for 1986-1987 were: 69.6% vs. 69.7% for blacks, 23.4% vs. 24.6% for whites, 6.2% vs. 4.3% for Hispanics, .7% vs. 1.2% for Asians, and .2% vs. .2% for native Americans. For intermediate schools this became 71.3% vs. 68.3% for blacks, 26.7% vs. 24.6% for whites, 1.6% vs. 5.7% for Hispanics, .3% vs. 1.1% for Asians, and .1% vs. .3% for native Americans. Figure 13 graphically displays this information.

Insert Figures 12 and 13, here

Figure 12

Student Body Composition (in Percent) by Sex
for the Original Project Perform Schools and Non-Project Perform Schools,
by Elementary and Intermediate School Levels

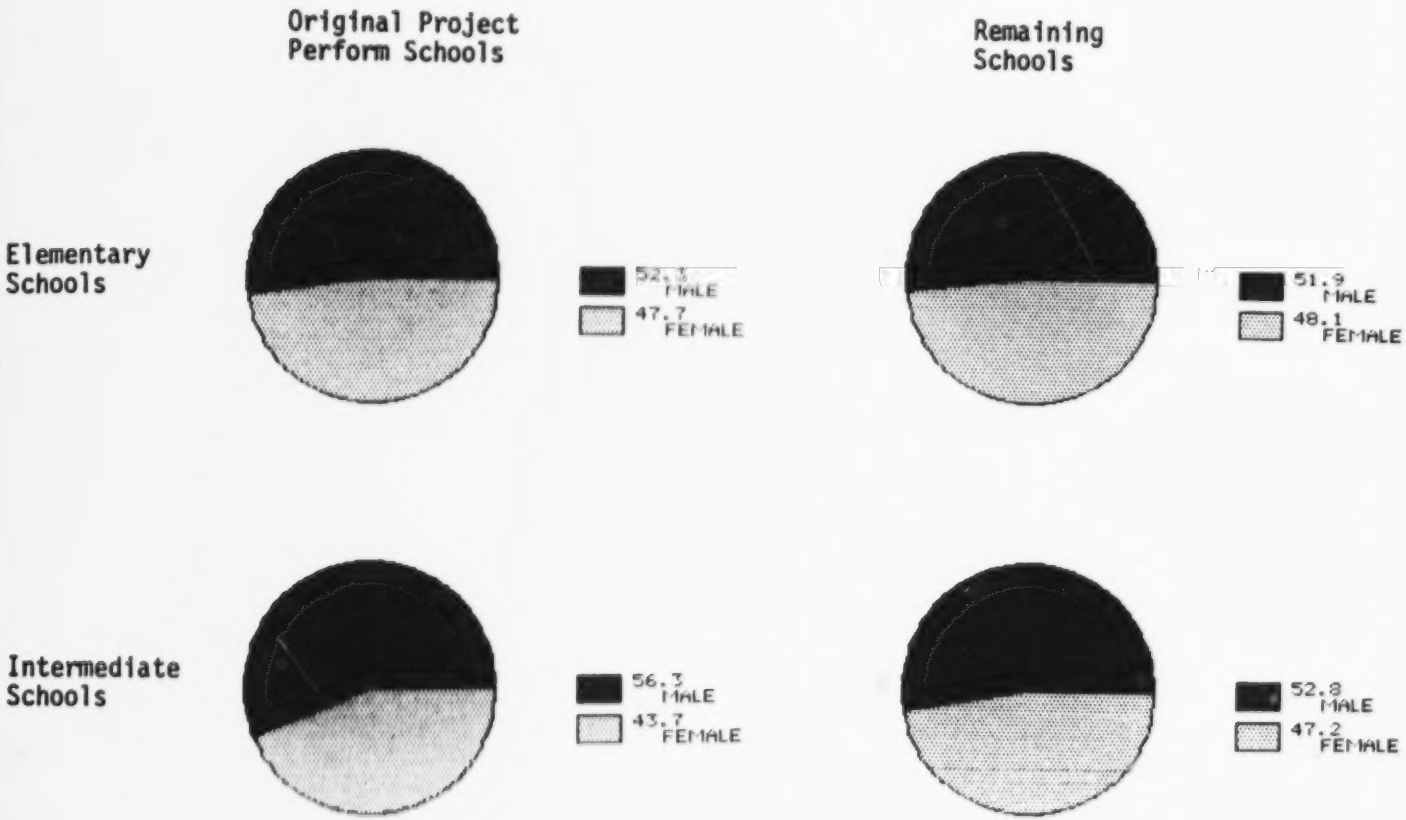
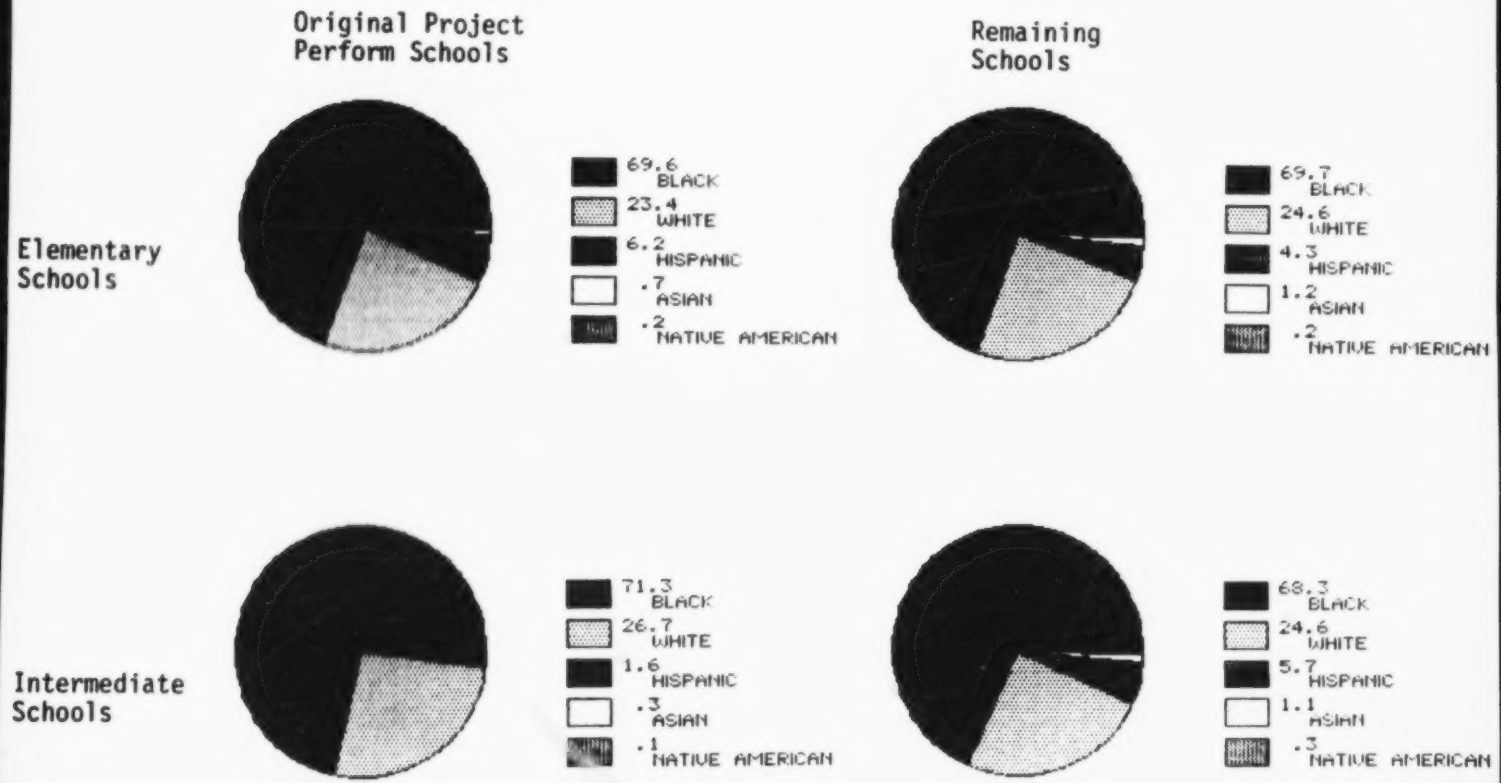


Figure 13

Student Body Composition (in Percent) by Race
for the Original Project Perform Schools and Non-Project Perform Schools,
by Elementary and Intermediate School Levels



Possible beneficial effects on staff morale and school climate of Project Perform remain unmeasured in this study. This social system approach to improving the quality of education on a building by building basis deserves further trial and refinement. It has been found that this approach may yield the desired results more fully in some buildings than in others, for a variety of reasons. When this becomes the case, then decision-makers can accommodate this information on a school by school basis as an alternative to either collapsing the whole project or forcing it on schools where it is not yielding results.

Relationships Between Reading Comprehension Pretest and Posttest Scores, and Posttest Reading Comprehension and Vocabulary Scores.

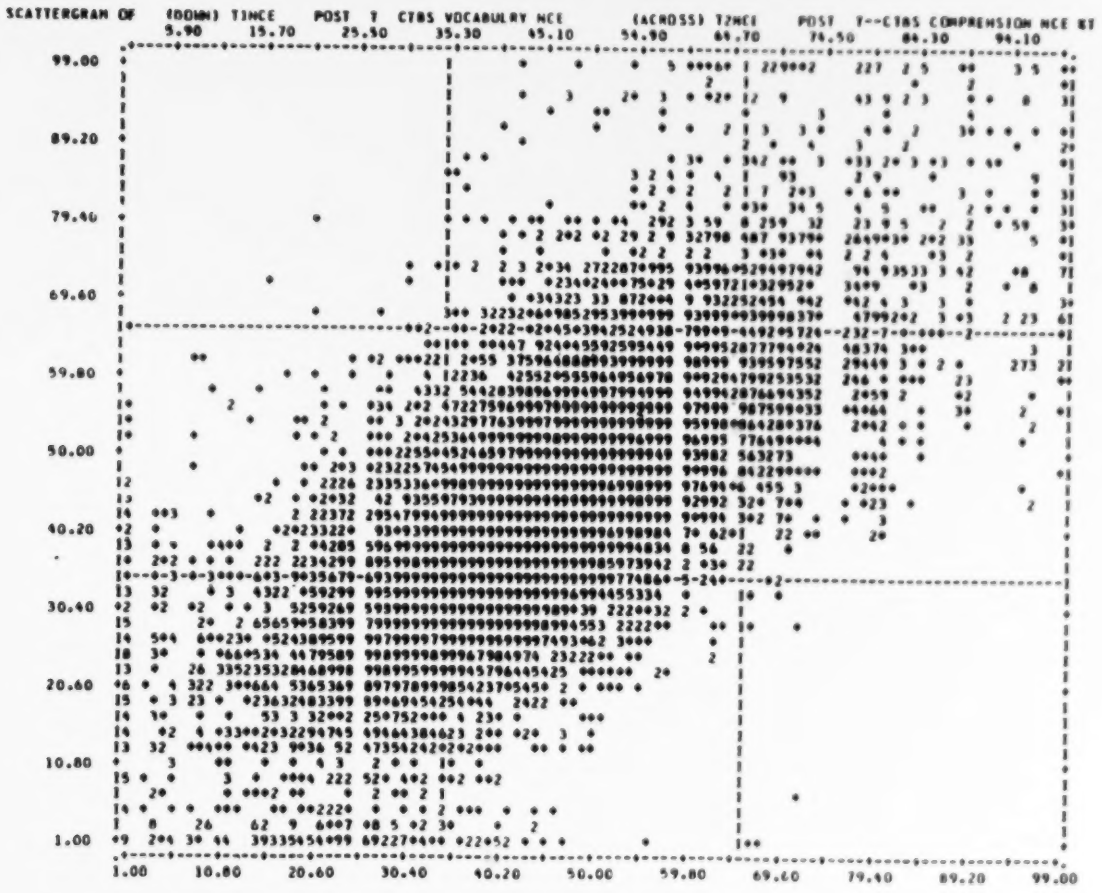
A random sample of 14,534 paired spring 1987 California Achievement Test (CAT) reading vocabulary and reading comprehension scores were correlated, with a resulting Pearson product-moment correlation coefficient (r) of .74 obtained. Thus, their shared (or common) variance exceeded fifty percent (.54764). Figure 14 displays this relationship graphically.

Pairing a random sample of 13,041 spring, 1986 Comprehensive Test of Basic Skills (CTBS) comprehension (pretest) scores with spring, 1987 California Achievement Test (CAT) reading comprehension (posttest) scores yielded a Pearson product-moment correlation (r) coefficient of .57563. This represents a shared (common) variance between the reading comprehension pretest and posttest of approximately one-third (.33135). This relationship between the spring, 1986 (pretest) and the spring, 1987 (posttest) reading comprehension scores is represented in Figure 15.

Insert Figures 14 and 15, here

Figure 14

The Relationship between the Spring, 1987 California Achievement Test (CAT) Reading Comprehension Scores (Horizontal) and the Spring, 1987 California Achievement Test (CAT) Reading Vocabulary Scores (Vertical) in the Cleveland City Schools*



Statistics:

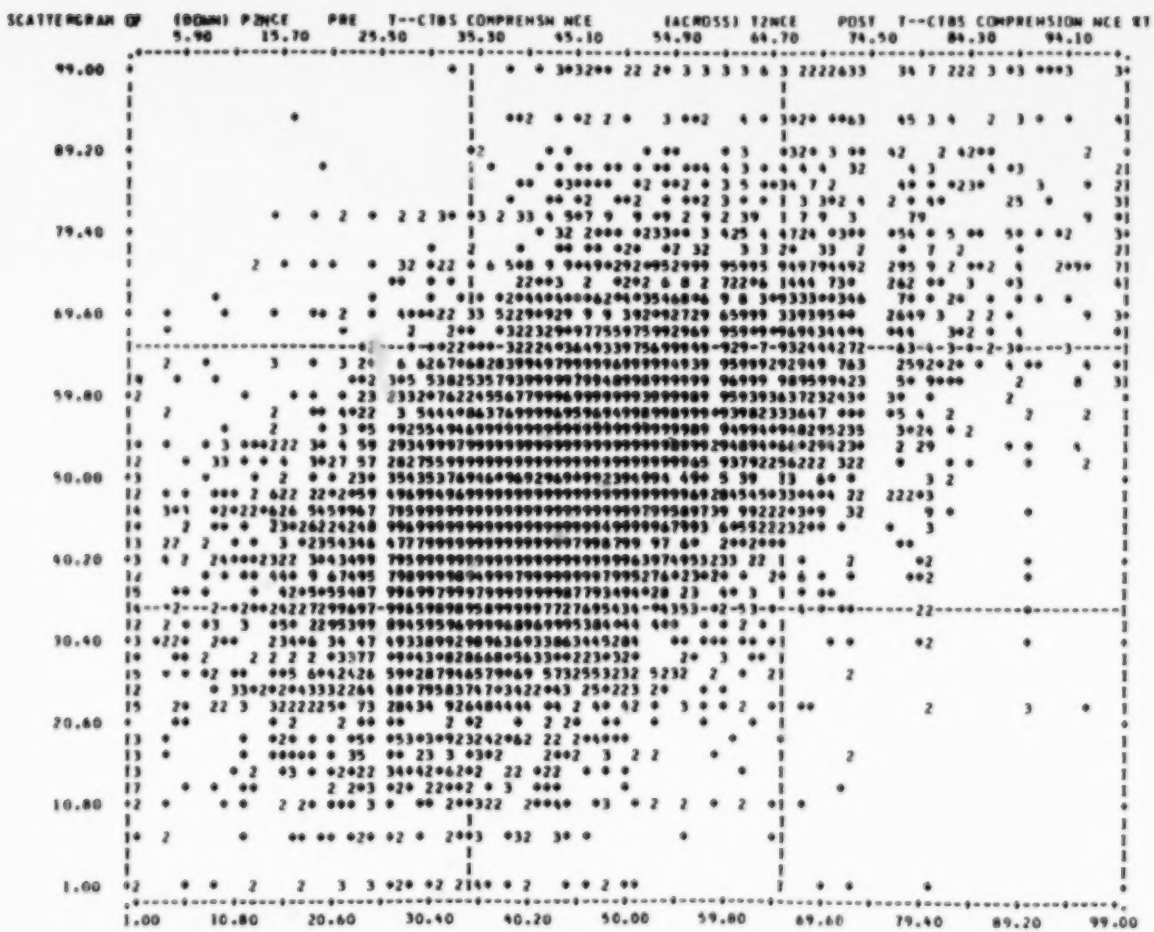
Pearson product-moment correlation coefficient (r)	.74003
R squared (R^2)	.54764
significance	$p < .00001$
standard error of estimate	11.76802
y-intercept	8.35980
slope	.78791
plotted values	14,534

**Note: An asterisk (*) is printed if only one value occurs at a plot point; but if more than one value occurs at a plot point that number occurs instead of an asterisk. Nine or more values at a plot point is simply represented by the number 9.

* This is based on a random sample of 14,534 paired scores from the grades 1 through 12 citywide reading test in a district whose average daily membership during the 1986-1987 school year was 72,447 students. Only those students who had both reading comprehension and reading vocabulary scores were available for selection and inclusion in this sample.

Figure 15

The Relationship between the Spring, 1986 Comprehensive Test of Basic Skills (CTBS) Reading Comprehension Pretest scores (Vertical) and the Spring, 1987 California Achievement Test (CAT) Reading Comprehension Posttest Scores (Horizontal) in the Cleveland City Schools*



Statistics:

Pearson product-moment correlation coefficient (r)	.57563
R squared (R^2)	.33135
significance	$p < .00001$
standard error of estimate	13.24968
y-intercept	25.06775
slope	.57389
plotted values	13,041

**Note: An asterisk (*) is printed if only one value occurs at a plot point; but if more than one value occurs at a plot point that number occurs instead of an asterisk. Nine or more values at a plot point is simply represented by the number 9.

* This is based on a random sample of 13,041 paired scores from the grades 1 through 12 citywide reading test in a district whose average daily membership during the 1986-1987 school year was 72,447 students. Only those students who had both pretest and posttest scores were available for selection and inclusion in this sample.

ANALYTIC SUMMARY

The purpose of this study was to analyze and interpret spring, 1986 and prior years citywide reading data so that accurate and usable information and recommendations would be available to decision-makers for the related planning, curriculum design, and implementation functions of the district.

Appendix A

APPENDIX A

Explanatory Notes for the following pages of Appendix A:

- The "+" symbol, not enclosed in parentheses, is placed above a school's name and building number in the following crosstabulation grid network if more than 60% of the school's total transition students moved from below the 33rd percentile on the 1985-1986 pretest to above the 33rd percentile on the posttest. This is a very favorable outcome. Transition students are the sum total of all students who, from pretest to posttest, moved from above to below, or below to above, the 33rd percentile (cut score).

- The "*" symbol, not enclosed in parentheses, is placed above a school's name and building number if more than 60% of the school's total transition students moved from above the 33rd percentile on the 1985-1986 pretest to below the 33rd percentile on the posttest. This is not a very favorable outcome.

- If the "+" or "*" symbols are enclosed in parentheses then the definitions above apply except that such marks pertain to the 1984-1985 school year instead of the 1985-1986 school year.

* CROSSTABULATION OF * * * * * * * * * * * * * * * * * *
GAINGRP BY CSCHLEV

		CSCHLEV				
	COUNT					
	ROW PCT	PUBLIC E	PUBLIC J	PUBLIC S	SPECIAL	ROW
	COL PCT	ELEMENTAR	UNIOR HS	ENIOR HS	SCHS&INS	TOTAL
	TOT PCT	3	4	5	6	
GAINGRP						
	1	10683	3517	3914	804	18918
D2NCE LE -7		56.5	18.6	20.7	4.2	46.6
		47.5	52.3	42.9	35.2	
		26.3	8.7	9.6	2.0	
	2	7167	2390	3571	977	14105
D2NCE -7 TO +7		50.8	16.9	25.3	6.9	34.7
		31.9	35.5	39.2	42.8	
		17.7	5.9	8.8	2.4	
	3	4623	823	1633	504	7583
D2NCE GE 7		61.0	10.9	21.5	6.6	18.7
		20.6	12.2	17.9	22.1	
		11.4	2.0	4.0	1.2	
COLUMN		22473	6730	9118	2285	40606
TOTAL		55.3	16.6	22.5	5.6	100.0

RAW CHI SQUARE = 497.98901 WITH 6 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0
CRAMER'S V = 0.07831
CONTINGENCY COEFFICIENT = 0.11007
LAMBDA (ASYMMETRIC) = 0.00798 WITH GAINGRP DEPENDENT. = 0.0 WITH CSCHLEV DEPENDENT.
LAMBDA (SYMMETRIC) = 0.00434
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00616 WITH GAINGRP DEPENDENT. = 0.00568 WITH CSCHLEV DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00591
KENDALL'S TAU B = 0.01824. SIGNIFICANCE = 0.0000
KENDALL'S TAU C = 0.01696. SIGNIFICANCE = 0.0000
GAMMA = 0.02941
SOMERS'S D (ASYMMETRIC) = 0.01846 WITH GAINGRP DEPENDENT. = 0.01802 WITH CSCHLEV DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.01824
ETA = 0.08240 WITH GAINGRP DEPENDENT. = 0.07465 WITH CSCHLEV DEPENDENT.
PEARSON'S R = 0.02414 SIGNIFICANCE = 0.0000

NUMBER OF MISSING OBSERVATIONS = 81807

86-87 DISCREPANT READING STUDY--ANALYSIS BY JIM ZAFIRAU, PH.D.
FILE PRPSTAPR (CREATION DATE = 02/14/98) 1985-86 PRE&1986-87 POST CTBS READING WITH 1986-87 APR

* CROSSTABULATION OF * * * * * * * * * * * * * * * * * * *
GAINGRP BY P2STAY9 PRE T--CTBS COMPRE.STAY9 PAGE 1 OF 1

	P2STAY9									
COUNT										
ROW PCT	BOTTOM 4	5-11 CEN	12-23 CE	24-40 CE	41-60 CE	61-77 CE	78-89 CE	90-96 CE	97-100 C	ROW
COL PCT	PERCENT	TILE 7 P	NTILE 12	NTILE 17	NTILE 20	NTILE 17	NTILE 12	NTILE 7	ENTILE 4	TOTAL
TOT PCT	1	2	3	4	5	6	7	8	9	
GAINGRP										
1	23	100	583	2561	4831	4141	2459	711	704	16113
D2NCE LE -7	0.1	0.6	3.6	15.9	30.0	25.7	15.3	4.4	4.4	45.2
	5.0	9.7	19.2	34.9	47.1	53.6	61.3	74.0	87.5	
	0.1	0.3	1.6	7.2	13.6	11.6	6.9	2.0	2.0	
2	66	270	1296	3341	4076	2619	1172	194	95	13129
D2NCE -7 TO +7	0.5	2.1	9.9	25.4	31.0	19.9	8.9	1.5	0.7	36.9
	14.4	26.2	42.7	45.6	39.7	33.9	29.2	20.2	11.8	
	0.2	0.8	3.6	9.4	11.4	7.4	3.3	0.5	0.3	
3	369	660	1158	1427	1359	959	378	56	6	6372
D2NCE GE 7	5.8	10.4	18.2	22.4	21.3	15.1	5.9	0.9	0.1	17.9
	80.6	64.1	38.1	19.5	13.2	12.4	9.4	5.8	0.7	
	1.0	1.9	3.3	4.0	3.8	2.7	1.1	0.2	0.0	
COLUMN	458	1030	3037	7329	10266	7719	4009	961	805	35614
TOTAL	1.3	2.9	8.5	20.6	28.8	21.7	11.3	2.7	2.3	100.0

RAW CHI SQUARE = 6078.45703 WITH 16 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0
CRAMER'S V = 0.29213
CONTINGENCY COEFFICIENT = 0.38183
LAMBDA (ASYMMETRIC) = 0.12302 WITH GAINGRP DEPENDENT. = 0.00268 WITH P2STAY9 DEPENDENT.
LAMBDA (SYMMETRIC) = 0.05501
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.07426 WITH GAINGRP DEPENDENT. = 0.04238 WITH P2STAY9 DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.05396
KENDALL'S TAU B = -0.28387. SIGNIFICANCE = 0.0000
KENDALL'S TAU C = -0.30268. SIGNIFICANCE = 0.0000
GAMMA = -0.39494
SOMERS'S D (ASYMMETRIC) = -0.25054 WITH GAINGRP DEPENDENT. = -0.32163 WITH P2STAY9 DEPENDENT.
SOMERS'S D (SYMMETRIC) = -0.28167
ETA = 0.37610 WITH GAINGRP DEPENDENT. = 0.35494 WITH P2STAY9 DEPENDENT.
PEARSON'S R =-0.35485 SIGNIFICANCE = 0.0000

NUMBER OF MISSING OBSERVATIONS = 86799

86-87 DISCREPANT READING STUDY--ANALYSIS BY JIM ZAFIRAU, PH.D.
FILE PRPSTAPR (CREATION DATE = 02/14/88) 1985-86 PRE&1986-87 POST CTBS READING WITH 1986-87 APR

* * * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * *
GAINGRP BY P1STAY9 PRE T--CTBS VOCAB. STAY9
* PAGE 1 OF 1

GAINGRP	P1STAY9: COUNT / ROW PCT / COL PCT / TOT PCT	BOTTOM 4 PERCENT 1	5-11 CENTILE 7 P 2	12-23 CENTILE 12 3	24-40 CENTILE 17 4	41-60 CENTILE 20 5	61-77 CENTILE 17 6	78-89 CENTILE 12 7	90-96 CENTILE 7 8	97-100 CENTILE 4 9	ROW TOTAL
1	COUNT	67	242	1153	2974	4862	4422	2720	1460	1257	19157
D2NCE LE -7	ROW PCT	0.3	1.3	6.0	15.5	25.4	23.1	14.2	7.6	6.6	46.6
	COL PCT	17.0	26.2	34.6	42.3	46.9	48.7	49.3	61.1	61.3	
	TOT PCT	0.2	0.6	2.8	7.2	11.8	10.8	6.6	3.6	3.1	
2	COUNT	90	270	1250	2649	3824	3224	1789	628	550	14274
D2NCE -7 TO +7	ROW PCT	0.6	1.9	8.8	18.6	26.8	22.6	12.5	4.4	3.9	34.7
	COL PCT	22.9	29.2	37.5	37.7	36.9	35.5	32.4	26.3	26.8	
	TOT PCT	0.2	0.7	3.0	6.4	9.3	7.8	4.4	1.5	1.3	
3	COUNT	236	413	932	1410	1691	1443	1011	301	242	7679
D2NCE GE 7	ROW PCT	3.1	5.4	12.1	18.4	22.0	18.8	13.2	3.9	3.2	18.7
	COL PCT	60.1	44.6	27.9	20.0	16.3	15.9	18.3	12.6	11.8	
	TOT PCT	0.6	1.0	2.3	3.4	4.1	3.5	2.5	0.7	0.6	
COLUMN		393	925	3335	7033	10377	9089	5520	2389	2049	41110
TOTAL		1.0	2.3	8.1	17.1	25.2	22.1	13.4	5.8	5.0	100.0

RAW CHI SQUARE = 1690.23315 WITH 16 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0
CRAMER'S V = 0.14338
CONTINGENCY COEFFICIENT = 0.19872
LAMBDA (ASYMMETRIC) = 0.01991 WITH GAINGRP DEPENDENT. = 0.0 WITH P1STAY9 DEPENDENT.
LAMBDA (SYMMETRIC) = 0.00829
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.01761 WITH GAINGRP DEPENDENT. = 0.00960 WITH P1STAY9 DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.01243
KENDALL'S TAU B = -0.12243. SIGNIFICANCE = 0.0000
KENDALL'S TAU C = -0.13229. SIGNIFICANCE = 0.0000
GAMMA = -0.16950
SOMERS'S D (ASYMMETRIC) = -0.10664 WITH GAINGRP DEPENDENT. = -0.14057 WITH P1STAY9 DEPENDENT.
SOMERS'S D (SYMMETRIC) = -0.12127
ETA = 0.18419 WITH GAINGRP DEPENDENT. = 0.15960 WITH P1STAY9 DEPENDENT.
PEARSON'S R = -0.15956 SIGNIFICANCE = 0.0000

NUMBER OF MISSING OBSERVATIONS = 81303

* CROSSTABULATION INDEX *

PAGE	TABLE
684	GAINGRP BY LUNCHCX
685	GAINGRP BY BIRACE
686	GAINGRP BY RACEW
687	GAINGRP BY SEXN
688	GAINGRP BY PLACECD
689	GAINGRP BY LANGCD
690	GAINGRP BY TGRADE
692	GAINGRP BY CSCHLEV
693	GAINGRP BY P2STAY9
694	GAINGRP BY P1STAY9

ELAPSED TIME REQUIRED.. 1086.33 SECONDS

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1068 CROSSTABS      VARIABLES = PARGROUP (1,2) TSCHNO (800,939) CSCHLEV (3,6) /
1069                TABLES    = PARGROUP BY CSCHLEV / PARGROUP BY TSCHNO BY CSCHLEV
1070 OPTIONS        9
1071 STATISTICS     ALL
1072 COMMENT        PARITY STUDY RELATED RUNS
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***** CROSSTABS PROBLEM REQUIRES 4512 BYTES WORKSPACE NOT INCLUDING VALUE LABELS *****

***** GIVEN WORKSPACE ALLOWS FOR 32767 LABELLED VALUES *****

***** WARNING ***** NON-INTEGER MISSING VALUE SPECIFICATIONS FOR THE FOLLOWING VARIABLES HAVE BEEN IGNORED.
CSCHLEV

* C R O S S T A B U L A T I O N O F *
PARGROUP TYPE OF PRE TO POST MOVE ACROSS 33RD%ILE BY CSCHLEV
* PAGE 1 OF 1

PARGROUP	COUNT / ROW PCT / COL PCT / TOT PCT	CSCHLEV: PUBLIC ELEMENTAR 3	PUBLIC JUNIOR HS 4	PUBLIC SENIOR HS 5	SPECIAL SCHS&INS 6	ROW TOTAL
BELOW TO ABOVE 3	1	1644	283	718	194	2839
		57.9	10.0	25.3	6.8	24.8
		26.5	13.3	27.3	39.0	
		14.3	2.5	6.3	1.7	
ABOVE TO BELOW 3	2	4562	1849	1914	304	8629
		52.9	21.4	22.2	3.5	75.2
		73.5	86.7	72.7	61.0	
		39.8	16.1	16.7	2.7	
	COLUMN TOTAL	6206	2132	2632	498	11468
		54.1	18.6	23.0	4.3	100.0

RAW CHI SQUARE = 223.82477 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0
CRAMER'S V = 0.13970
CONTINGENCY COEFFICIENT = 0.13836
LAMBDA (ASYMMETRIC) = 0.0 WITH PARGROUP DEPENDENT. = 0.0 WITH CSCHLEV DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.01869 WITH PARGROUP DEPENDENT. = 0.00934 WITH CSCHLEV DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.01246
KENDALL'S TAU B = 0.00073. SIGNIFICANCE = 0.4671
KENDALL'S TAU C = 0.00070. SIGNIFICANCE = 0.4671
GAMMA = 0.00152
SOMERS'S D (ASYMMETRIC) = 0.00056 WITH PARGROUP DEPENDENT. = 0.00094 WITH CSCHLEV DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.00070
ETA = 0.13969 WITH PARGROUP DEPENDENT. = 0.02153 WITH CSCHLEV DEPENDENT.
PEARSON'S R =-0.02141 SIGNIFICANCE = 0.0109

NUMBER OF MISSING OBSERVATIONS =110945

FILE PPPSTAPR (CREATION DATE = 02/14/88) 1985-86 PRE&1986-87 POST CTBS READING WITH 1986-87 APR

* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * *
PARGROUP TYPE OF PRE TO POST MOVE ACROSS 33RD%ILE BY TSCHNO POST-T --SCHOOL NUMBER
CONTROLLING FOR..
CSCHLEV VALUE.. 3 PUBLIC ELEMENTARY

PARGROUP	COUNT / ROW PCT / COL PCT / TOT PCT	016 A.J. RICKOFFK 851	020 ANTH O.WAYNEK 852	023 ARTE MU WARDK 853	036 B.FR ANKLIN K 854	064 BUHR ER 855	088 CLAR K K 856	107 CRAN K WOOD 857	109 D.E. MORGAN 858	165 E.B. DESAUZEK 859	171 F.H. PARKWAYK 860	ROW TOTAL
1 BELOW TO ABOVE 3	COUNT	17	35	8	36	11	35	10	13	3	14	1644
	ROW PCT	1.0	2.1	0.5	2.2	0.7	2.1	0.6	0.8	0.2	0.9	26.5
	COL PCT	30.4	32.1	17.8	30.3	19.3	49.3	33.3	17.3	25.0	22.2	
	TOT PCT	0.3	0.6	0.1	0.6	0.2	0.6	0.2	0.2	0.0	0.2	
2 ABOVE TO BELOW 3	COUNT	39	74	37	83	46	36	20	62	9	49	4562
	ROW PCT	0.9	1.6	0.8	1.8	1.0	0.8	0.4	1.4	0.2	1.1	73.5
	COL PCT	69.6	67.9	82.2	69.7	80.7	50.7	66.7	82.7	75.0	77.8	
	TOT PCT	0.6	1.2	0.6	1.3	0.7	0.6	0.3	1.0	0.1	0.8	
COLUMN TOTAL		56	109	45	119	57	71	30	75	12	63	6206
		0.9	1.8	0.7	1.9	0.9	1.1	0.5	1.2	0.2	1.0	100.0

(CONTINUED)

* C R O S S T A B U L A T I O N O F *

PARGROUP TYPE OF PRE TO POST MOVE ACROSS 33RD%ILE BY TSCHNO POST-T --SCHOOL NUMBER

CONTROLLING FOR..
CSCHLEV VALUE.. 3 PUBLIC ELEMENTARY

* PAGE 2 OF 9

PARGROUP (TSCHNO →) COUNT / ROW PCT / COL PCT / TOT PCT	* 184 FULLERTON K 861	* 188 GARFIELD K 862	* 198 G.W. CARVERK 863	* 224 GORDON K 864	* 225 GRACEMOUNT K 865	* 228 HALLE K 866	* 301 KENTUCKY K 867	* 345 M.A. IRELANDK 868	* 347 M.B. MARTIN K 869	* 350 M.M. BETHUNEK 870	ROW TOTAL
1 BELOW TO ABOVE 3	9 0.5 17.6 0.1	12 0.7 25.5 0.2	12 0.7 24.0 0.2	34 2.1 26.6 0.5	15 0.9 39.5 0.2	13 0.8 13.8 0.2	9 0.5 13.2 0.1	14 0.9 20.3 0.2	12 0.7 15.4 0.2	12 0.7 22.6 0.2	1644 26.5
2 ABOVE TO BELOW 3	42 0.9 82.4 0.7	35 0.8 74.5 0.6	38 0.8 76.0 0.6	94 2.1 73.4 1.5	23 0.5 60.5 0.4	81 1.8 86.2 1.3	59 1.3 86.8 1.0	55 1.2 79.7 0.9	66 1.4 84.6 1.1	41 0.9 77.4 0.7	4562 73.5
COLUMN TOTAL	51 0.8	47 0.8	50 0.8	128 2.1	38 0.6	94 1.5	68 1.1	69 1.1	78 1.3	53 0.9	6206 100.0

(CONTINUED)

FILE PRPSTAPR (CREATION DATE = 02/14/88) 1985-86 PRE&1986-87 POST CTBS READING WITH 1986-87 APR

* C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * * *

PARGROUP TYPE OF PRE TO POST MOVE ACROSS 33RD%ILE BY TSCHNO POST-T --SCHOOL NUMBER

CONTROLLING FOR.. CSCHLEV VALUE.. 3 PUBLIC ELEMENTARY

PARGROUP	TSCHNO / COUNT / ROW PCT / COL PCT / TOT PCT	1352 MCKINLEY K	360 HIS K	404 MT.P LEASANTK	412 N.HA WTHORNEK	428 D.H. PERRY K	436 DRCH ARD K	452 PAUL REVEREK	525 STEP .E.HOWEK N	548 UNIO K ON	560 WALT K	ROW TOTAL
BELOW TO ABOVE 3	1	26	14	32	9	21	23	37	19	11	18	1644
		1.6	0.9	1.9	0.5	1.3	1.4	2.3	1.2	0.7	1.1	26.5
		34.2	35.0	27.6	17.6	20.2	30.3	24.7	29.2	17.5	20.2	
		0.4	0.2	0.5	0.1	0.3	0.4	0.6	0.3	0.2	0.3	
ABOVE TO BELOW 3	2	50	26	84	42	83	53	113	46	52	71	4562
		1.1	0.6	1.8	0.9	1.8	1.2	2.5	1.0	1.1	1.6	73.5
		65.8	65.0	72.4	82.4	79.8	69.7	75.3	70.8	82.5	79.8	
		0.8	0.4	1.4	0.7	1.3	0.9	1.8	0.7	0.8	1.1	
	COLUMN TOTAL	76	40	116	51	104	76	150	65	63	89	6206
		1.2	0.6	1.9	0.8	1.7	1.2	2.4	1.0	1.0	1.4	100.0

(CONTINUED)

BOARD OF EDUCATION-CLEVELAND CITY SCHOOL DISTRICT
86-87 DISCREPANT READING STUDY--ANALYSIS BY JIM ZAFIRAU, PH.D.
FILE PRPSTAPR (CREATION DATE = 02/14/88) 1985-86 PRE&1986-87 POST CTBS READING WITH 1986-87 APR

* C R O S S T A B U L A T I O N O F *
PARGROUP TYPE OF PRE TO POST MOVE ACROSS 33RDXILE BY TSCHNO POST-T --SCHOOL NUMBER
CONTROLLING FOR..
CSCHLEV VALUE.. 3 PUBLIC ELEMENTARY
*

PARGROUP	COUNT / ROW PCT / COL PCT / TOT PCT	TSCHNO * 1572 WARNIER K 882	* 592 WATTERSONLKK 883	* 004 A.STEVENSONK 884	* 058 BROOKLAWN K 886	* 068 CASE K 887	* C79 C.H. LAKE K 888	* 156 E.MADISON K 890	* 168 EUCLID PARKK 891	* 094 F.ED .CENTER 892	* 252 LONGFELLOW K 893	ROW TOTAL
BELOW TO ABOVE 3	1	22	40	6	16	30	37	9	25	24	23	1644
		1.3	2.4	0.4	1.0	1.8	2.3	0.5	1.5	1.5	1.4	26.5
		20.6	37.7	12.8	21.6	25.0	38.1	13.4	23.4	23.8	27.1	
		0.4	0.6	0.1	0.3	0.5	0.6	0.1	0.4	0.4	0.4	
ABOVE TO BELOW 3	2	85	66	41	58	90	60	58	82	77	62	4562
		1.9	1.4	0.9	1.3	2.0	1.3	1.3	1.8	1.7	1.4	73.5
		79.4	62.3	87.2	78.4	75.0	61.9	86.6	76.6	76.2	72.9	
		1.4	1.1	0.7	0.9	1.5	1.0	0.9	1.3	1.2	1.0	
	COLUMN TOTAL	107	106	47	74	120	97	67	107	101	85	6206
		1.7	1.7	0.8	1.2	1.9	1.6	1.1	1.7	1.6	1.4	100.0

(CONTINUED)

* C R O S S T A B U L A T I O N O F *
PARGROUP TYPE OF PRE TO POST MOVE ACROSS 33RD%ILE BY TSCHNO POST-T --SCHOOL NUMBER
CONTROLLING FOR..
CSCHLEV VALUE.. 3 PUBLIC ELEMENTARY
* PAGE 5 OF 9

PAPGROUP	TSCHNO COUNT ROW PCT COL PCT TOT PCT	* 297 K.W. CLEMENTK 894	* 354 M.ST ERLING K 895	* 372 MILE S PARK 896	* 486 ROB. FULTON K 897	* 544 TREM ONT K 898	* 551 VERD .BROBSTK 899	* 556 WADE PARK K 900	* 621 WM.R .HARPERK 901	* 605 WILL OW K 902	* 308 LAFA YETTE K 903	ROW TOTAL
BELOW TO ABOVE 3	1	1	33	28	29	30	15	20	24	8	27	1644
		0.1	2.0	1.7	1.8	1.8	0.9	1.2	1.5	0.5	1.6	26.5
		4.8	28.0	29.8	32.2	26.8	31.9	16.4	29.6	14.3	27.6	
		0.0	0.5	0.5	0.5	0.5	0.2	0.3	0.4	0.1	0.4	
ABOVE TO BELOW 3	2	20	85	66	61	82	32	102	57	48	71	4562
		0.4	1.9	1.4	1.3	1.8	0.7	2.2	1.2	1.1	1.6	73.5
		95.2	72.0	70.2	67.8	73.2	68.1	83.6	70.4	85.7	72.4	
		0.3	1.4	1.1	1.0	1.3	0.5	1.6	0.9	0.8	1.1	
	COLUMN TOTAL	21	118	94	90	112	47	122	81	56	98	6206
		0.3	1.9	1.5	1.5	1.8	0.8	2.0	1.3	0.9	1.6	100.0

(CONTINUED)

* * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * *

PARGROUP TYPE OF PRE TO POST MOVE ACROSS 33RD%ILE BY TSCHNO POST-T --SCHOOL NUMBER

CONTROLLING FOR..
CSCHLEV VALUE.. 3 PUBLIC ELEMENTARY

TSCHNO

PARGROUP	COUNT / ROW PCT / COL PCT / TOT PCT	003 A.A. BENESCHK 904	012 ALMIRA K 905	021 A.G.DINA K 906	041 BOLTON K 907	636 B.WOODLAND K 908	065 CAPT .A.ROTHK 909	077 C.DICKENS K 910	081 CHARLES ORRK 911	104 CORLETT K 912	112 DENISON K 913	ROW TOTAL
1 BELOW TO ABOVE 3		10	14	30	27	16	21	22	8	12	35	1644
		0.6	0.9	1.8	1.6	1.0	1.3	1.3	0.5	0.7	2.1	26.5
		12.5	15.6	30.3	49.1	37.2	26.9	22.0	18.6	29.3	37.6	
		0.2	0.2	0.5	0.4	0.3	0.3	0.4	0.1	0.2	0.6	
2 ABOVE TO BELOW 3		70	76	69	28	27	57	78	35	29	58	4562
		1.5	1.7	1.5	0.6	0.6	1.2	1.7	0.8	0.6	1.3	73.5
		87.5	84.4	69.7	50.9	62.8	73.1	78.0	81.4	70.7	62.4	
		1.1	1.2	1.1	0.5	0.4	0.9	1.3	0.6	0.5	0.9	
COLUMN TOTAL		80	90	99	55	43	78	100	43	41	93	6206
		1.3	1.5	1.6	0.9	0.7	1.3	1.6	0.7	0.7	1.5	100.0

(CONTINUED)

* C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * *
PARGROUP TYPE OF PRE TO POST MOVE ACROSS 33RD%ILE BY TSCHNO POST-T --SCHOOL NUMBER
CONTROLLING FOR..
CSCHLEV VALUE.. 3 PUBLIC ELEMENTARY
* PAGE 7 OF 9

PARGROUP (COUNT / ROW PCT / COL PCT / TOT PCT)	TSCHNO 124 DIKE 914	130 D.MAK CARTHURK 915	148 EAST CLARK K 916	200 GIDD INGS K 917	240 HARV EY RICEK 918	270 IOWA -MAPLE K 920	294 JOHN W.RAPERK 921	295 J.F. LANDIS K 922	338 L.AG ASSIZ K 923	339 L.PA STEUR K 924	ROW TOTAL
1 BELOW TO ABOVE 3	28	2	15	13	31	15	24	25	15	25	
	1.7	0.1	0.9	0.8	1.9	0.9	1.5	1.5	0.9	1.5	1644
	40.0	16.7	34.9	28.3	27.2	22.7	34.3	24.3	40.5	29.1	26.5
	0.5	0.0	0.2	0.2	0.5	0.2	0.4	0.4	0.2	0.4	
2 ABOVE TO BELOW 3	42	10	28	33	83	51	46	78	22	61	
	0.9	0.2	0.6	0.7	1.8	1.1	1.0	1.7	0.5	1.3	4562
	60.0	83.3	65.1	71.7	72.8	77.3	65.7	75.7	59.5	70.9	73.5
	0.7	0.2	0.5	0.5	1.3	0.8	0.7	1.3	0.4	1.0	
COLUMN TOTAL	70	12	43	46	114	66	70	103	37	86	6206
	1.1	0.2	0.7	0.7	1.8	1.1	1.1	1.7	0.6	1.4	100.0

(CONTINUED)

* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * *
PARGROUP TYPE OF PRE TO POST MOVE ACROSS 33RD%ILE BY TSCHNO POST-T --SCHOOL NUMBER
CONTROLLING FOR..
CSCHLEV VALUE.. 3 PUBLIC ELEMENTARY
* PAGE 8 OF 9

TSCHNO COUNT ROW PCT COL PCT TOT PCT PARGROUP	1353 M.C. SELTZER K 925	368 MILES K 926	376 M.STANDISH K 927	388 M.CLEAVELAND 928	396 MOUND K 929	400 MT.AUBURN K 930	451 P.L. DUNBAR K 931	485 RIVERSIDE K 932	487 R.G. JONES K 933	500 SCRANTON K 934	ROW TOTAL
1	33	25	21	24	22	20	14	8	6	21	
BELOW TO ABOVE 3	2.0	1.5	1.3	1.5	1.3	1.2	0.9	0.5	0.4	1.3	1644
	37.5	20.8	25.0	28.2	39.3	30.3	21.5	53.3	30.0	28.8	26.5
	0.5	0.4	D.3	0.4	0.4	0.3	0.2	0.1	0.1	0.3	
2	55	95	63	61	34	46	51	7	14	52	
ABOVE TO BELOW 3	1.2	2.1	1.4	1.3	0.7	1.0	1.1	0.2	0.3	1.1	4562
	62.5	79.2	75.0	71.8	60.7	69.7	78.5	46.7	70.0	71.2	73.5
	0.9	1.5	1.0	1.0	0.5	0.7	0.8	0.1	0.2	0.8	
COLUMN	88	120	84	85	56	66	65	15	20	73	6206
TOTAL	1.4	1.9	1.4	1.4	0.9	1.1	1.0	0.2	0.3	1.2	100.0

(CONTINUED)

* C R O S S T A B U L A T I O N O F *
PARGROUP TYPE OF PRE TO POST MOVE ACROSS 33RDXILE BY TSCHNO POST-T --SCHOOL NUMBER
CONTROLLING FOR..
CSCHLEV VALUE.. 3 PUBLIC ELEMENTARY
* PAGE 9 OF 9

PARGROUP	COUNT / ROW PCT / COL PCT / TOT PCT	TSCHNO * 1550 VALLEYVIEW K 935	* 596 WAVERLY K 936	* 622 WM.C.BRYANTK 937	* 638 WOLAND HILLK 938	* 256 HICKS CENTE 939	ROW TOTAL
1 BELOW TO ABOVE 3	COUNT	7	30	12	24	8	1644
	ROW PCT	0.4	1.8	0.7	1.5	0.5	26.5
	COL PCT	35.0	34.1	21.8	28.9	30.8	
	TOT PCT	0.1	0.5	0.2	0.4	0.1	
2 ABOVE TO BELOW 3	COUNT	13	58	43	59	18	4562
	ROW PCT	0.3	1.3	0.9	1.3	0.4	73.5
	COL PCT	65.0	65.9	78.2	71.1	69.2	
	TOT PCT	0.2	0.9	0.7	1.0	0.3	
COLUMN TOTAL		20	88	55	83	26	6206
		0.3	1.4	0.9	1.3	0.4	100.0

3 OUT OF 170 (1.8%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 3.179
RAW CHI SQUARE = 196.17641 WITH 84 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0000
CRAMER'S V = 0.17779
CONTINGENCY COEFFICIENT = 0.17505
LAMBDA (ASYMMETRIC) = 0.00061 WITH PARGROUP DEPENDENT. = 0.00050 WITH TSCHNO DEPENDENT.
LAMBDA (SYMMETRIC) = 0.00052
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.02775 WITH PARGROUP DEPENDENT. = 0.00369 WITH TSCHNO DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00651
KENDALL'S TAU B = -0.02653. SIGNIFICANCE = 0.0055
KENDALL'S TAU C = -0.03288. SIGNIFICANCE = 0.0055
CONDITIONAL GAMMA = -0.04278
SOMERS'S D (ASYMMETRIC) = -0.01667 WITH PARGROUP DEPENDENT. = -0.04221 WITH TSCHNO DEPENDENT.
SOMERS'S D (SYMMETRIC) = -0.02390
ETA = 0.17781 WITH PARGROUP DEPENDENT. = 0.01851 WITH TSCHNO DEPENDENT.
PEARSON'S R = -0.03145 SIGNIFICANCE = 0.0066

* C R O S S T A B U L A T I O N O F *
PARGROUP TYPE OF PRE TO POST MOVE ACROSS 33RD%ILE BY TSCHNO POST-T --SCHOOL NUMBER
CONTROLLING FOR..
CSCHLEV VALUE.. 4 PUBLIC JUNIOR HS
* PAGE 1 OF 3

PARGROUP	TSCHNO / COUNT / ROW PCT / COL PCT / TOT PCT	1355 MARTIN L.KIN 820	005 A.B. HART 821	009 AL. HAMILTON 822	024 AUDUBON 823	066 C.F. SHULER 824	076 CENTRAL 825	080 C.A. MOONEY 826	078 C.W. ELIOT 827	090 C.E. WESTROPP 828	164 EMPIRE 829	ROW TOTAL
BELOW TO ABOVE 3	1	8	18	12	9	19	19	16	8	13	12	283
		2.8	6.4	4.2	3.2	6.7	6.7	5.7	2.8	4.6	4.2	13.3
		18.2	14.3	14.1	5.9	25.7	16.0	19.3	11.3	14.1	15.4	
		0.4	0.8	0.6	0.4	0.9	0.9	0.8	0.4	0.6	0.6	
ABOVE TO BELOW 3	2	36	108	73	144	55	100	67	63	79	66	1849
		1.9	5.8	3.9	7.8	3.0	5.4	3.6	3.4	4.3	3.6	86.7
		81.8	85.7	85.9	94.1	74.3	84.0	80.7	88.7	85.9	84.6	
		1.7	5.1	3.4	6.8	2.6	4.7	3.1	3.0	3.7	3.1	
COLUMN TOTAL		44	126	85	153	74	119	83	71	92	78	2132
		2.1	5.9	4.0	7.2	3.5	5.6	3.9	3.3	4.3	3.7	100.0

(CONTINUED)

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86-87 DISCREPANT READING STUDY--ANALYSIS BY JIM ZAFIRAU, PH.D.
FILE PRPSTAPR (CREATION DATE = 02/14/88) 1985-86 PRE&1986-87 POST CTBS READING WITH 1986-87 APR

* C R O S S T A B U L A T I O N O F *
PARGROUP TYPE OF PRE TO POST MOVE ACROSS 33RD%ILE BY TSCHNO POST-T --SCHOOL NUMBER
CONTROLLING FOR..
CSCHLEV VALUE.. 4 PUBLIC JUNIOR HS
* PAGE 2 OF 3

PARGROUP	COUNT / ROW PCT / COL PCT / TOT PCT	TSCHNO * 172 F.D. ROOSEVEL 830	* 233 H.E. DAVIS 831	* 328 LINCOLN 832	* 343 M. S PELLACY 833	* 411 NATHAN HALE 835	* 415 N.D. BAKER 836	* 448 PAT. HENRY 837	* 482 R. JAMISON 838	* 536 T.JEFFERSON 839	* 279 J.M. GALLAGHE 840	ROW TOTAL
BELOW TO ABOVE 3	1	5	8	12	20	12	4	14	14	11	26	283
		1.8	2.8	4.2	7.1	4.2	1.4	4.9	4.9	3.9	9.2	13.3
		7.4	10.5	11.7	10.4	9.0	7.0	18.2	23.0	11.8	24.5	
		0.2	0.4	0.6	0.9	0.6	0.2	0.7	0.7	0.5	1.2	
ABOVE TO BELOW 3	2	63	68	91	173	121	53	63	47	82	80	1849
		3.4	3.7	4.9	9.4	6.5	2.9	3.4	2.5	4.4	4.3	86.7
		92.6	89.5	88.3	89.6	91.0	93.0	81.8	77.0	88.2	75.5	
		3.0	3.2	4.3	8.1	5.7	2.5	3.0	2.2	3.8	3.8	
	COLUMN TOTAL	68	76	103	193	133	57	77	61	93	106	2132
		3.2	3.6	4.8	9.1	6.2	2.7	3.6	2.9	4.4	5.0	100.0

(CONTINUED)

9

86-87 DISCREPANT READING STUDY--ANALYSIS BY JIM ZAFIRAU, PH.D.
FILE PRPSTAPR (CREATION DATE = 02/14/88) 1985-86 PRE&1986-87 POST CTBS READING WITH 1986-87 APR

* C R O S S T A B U L A T I O N O F *
PARGROUP TYPE OF PRE TO POST MOVE ACROSS 33RD%ILE BY TSCHNO POST-T --SCHOOL NUMBER
CONTROLLING FOR..
CSCHLEV VALUE.. 4 PUBLIC JUNIOR HS
* PAGE 3 OF 3

PARGROUP	COUNT / ROW PCT / COL PCT / TOT PCT	TSCHNO 615 W. Y OUNG 841 *	616 WILB .WRIGHT 842 *	624 WILL SON 844 *	ROW TOTAL
BELOW TO ABOVE 3	1	3	6	14	283
		1.1	2.1	4.9	13.3
		25.0	5.2	12.5	
		0.1	0.3	0.7	
ABOVE TO BELOW 3	2	9	110	98	1849
		0.5	5.9	5.3	86.7
		75.0	94.8	87.5	
		0.4	5.2	4.6	
	COLUMN TOTAL	12	116	112	2132
		0.6	5.4	5.3	100.0

1 OUT OF 46 (2.2%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 1.593
RAW CHI SQUARE = 56.95146 WITH 22 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0001
CRAMER'S V = 0.16344
CONTINGENCY COEFFICIENT = 0.16130
LAMBDA (ASYMMETRIC) = 0.0 WITH PARGROUP DEPENDENT. = 0.00309 WITH TSCHNO DEPENDENT.
LAMBDA (SYMMETRIC) = 0.00270
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.03362 WITH PARGROUP DEPENDENT. = 0.00431 WITH TSCHNO DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00765
KENDALL'S TAU B = 0.00755. SIGNIFICANCE = 0.3385
KENDALL'S TAU C = 0.00706. SIGNIFICANCE = 0.3385
CONDITIONAL GAMMA = 0.01609
SOMERS'S D (ASYMMETRIC) = 0.00372 WITH PARGROUP DEPENDENT. = 0.01534 WITH TSCHNO DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.00599
ETA = 0.16346 WITH PARGROUP DEPENDENT. = 0.0 WITH TSCHNO DEPENDENT.
PEARSON'S R = 0.01011 SIGNIFICANCE = 0.3204

BOARD OF EDUCATION-CLEVELAND CITY SCHOOL DISTRICT
86-87 DISCREPANT READING STUDY--ANALYSIS BY JIM ZAFIRAU, PH.D.
FILE PRPSTAPR (CREATION DATE = 02/14/98) 1985-86 PRE&1986-87 POST CTBS READING WITH 1986-87 APR

* C R O S S T A B U L A T I O N O F *
PARGROUP TYPE OF PRE TO POST MOVE ACROSS 33RD%ILE BY TSCHNO POST-T --SCHOOL NUMBER
CONTROLLING FOR..
CSCHLEV VALUE.. 5 PUBLIC SENIOR HS
*

PARGROUP	TSCHNO COUNT / ROW PCT / COL PCT / TOT PCT	*144 EAST HIGH 802	*161 EAST TECH 803	*220 GLEN VILLE 804	*273 J.F. RHODES 805	*276 JOHN ADAMS 806	*284 JOHN HAY 807	*285 J.F. KENNEDY 808	*292 J.MA RSHALL 809	*330 LINC OLN-W. 810	*512 SOUT H 812	ROW TOTAL
BELOW TO ABOVE 3	1	63	31	59	33	72	60	61	76	73	77	718
		8.8	4.3	8.2	4.6	10.0	8.4	8.5	10.6	10.2	10.7	27.3
		30.3	24.6	33.3	23.1	29.4	29.3	27.9	22.6	34.1	38.7	
		2.4	1.2	2.2	1.3	2.7	2.3	2.3	2.9	2.8	2.9	
ABOVE TO BELOW 3	2	145	95	118	110	173	145	158	260	141	122	1914
		7.6	5.0	6.2	5.7	9.0	7.6	8.3	13.6	7.4	6.4	72.7
		69.7	75.4	65.7	76.9	70.6	70.7	72.1	77.4	65.9	61.3	
		5.5	3.6	4.5	4.2	6.6	5.5	6.0	9.9	5.4	4.6	
	COLUMN TOTAL	208	126	177	143	245	205	219	336	214	199	2632
		7.9	4.8	6.7	5.4	9.3	7.8	8.3	12.8	8.1	7.6	100.0

(CONTINUED)

25
28
22
32
20
36
40
100 mm
A5
1.0
1.1
1.25
1.4
1.6
2.8
2.5
3.2
2.2
3.6
2.0
4.0
1.8
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890
1.0 mm
1.5 mm
2.0 mm

FILE .PRPSTAPR (CREATION DATE = 02/14/98) 1985-86 PRE&1986-87 POST CTBS READING WITH 1986-87 APR

* C R O S S T A B U L A T I O N O F *
PARGROUP TYPE OF PRE TO POST MOVE ACROSS 33PD%ILE BY TSCHNO POST-T --SCHOOL NUMBER
CONTROLLING FOR..
CSCHLEV VALUE.. 5 PUBLIC SENIOR HS
* PAGE 2 OF 2

PARGROUP	TSCHNO: COUNT / ROW PCT / COL PCT / TOT PCT	*1612 WEST TECH 813	*096 COLL INWOOD 814	ROW TOTAL
BELOW TO ABOVE 3	1	64	49	718
		8.9	6.8	27.3
		21.1	19.1	
		2.4	1.9	
ABOVE TO BELOW 3	2	239	208	1914
		12.5	10.9	72.7
		78.9	80.9	
		9.1	7.9	
COLUMN TOTAL		303	257	2632
		11.5	9.8	100.0

RAW CHI SQUARE = 43.25500 WITH 11 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0000
CRAMER'S V = 0.12820
CONTINGENCY COEFFICIENT = 0.12716
LAMBDA (ASYMMETRIC) = 0.0 WITH PARGROUP DEPENDENT. = 0.00044 WITH TSCHNO DEPENDENT.
LAMBDA (SYMMETRIC) = 0.00033
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.01400 WITH PARGROUP DEPENDENT. = 0.00335 WITH TSCHNO DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00540
KENDALL'S TAU B = 0.03522. SIGNIFICANCE = 0.0170
KENDALL'S TAU C = 0.04235. SIGNIFICANCE = 0.0170
CONDITIONAL GAMMA = 0.05840
SOMERS'S D (ASYMMETRIC) = 0.02325 WITH PARGROUP DEPENDENT. = 0.05337 WITH TSCHNO DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.03239
ETA = 0.12822 WITH PARGROUP DEPENDENT. = 0.0 WITH TSCHNO DEPENDENT.
PEARSON'S R = 0.04083 SIGNIFICANCE = 0.0181

BOARD OF EDUCATION-CLEVELAND CITY SCHOOL DISTRICT
86-87 DISCREPANT READING STUDY--ANALYSIS BY JIM ZAFIRAU, PH.D.

FILE PRPSTAPR (CREATION DATE = 02/14/88) 1985-86 PRE&1986-87 POST CTBS READING WITH 1986-87 APR

* C R O S S T A B U L A T I O N O F *
PARGROUP TYPE OF PRE TO POST MOVE ACROSS 33RD%ILE BY TSCHNO POST-T --SCHOOL NUMBER
CONTROLLING FOR..
CSCHLEV VALUE.. 6 SPECIAL SCHS&INST.
* PAGE 1 OF 1

PARGROUP (TSCHNO: COUNT / ROW PCT / COL PCT / TOT PCT)	* 1803 LAW-PUB.SER. 800	* 349 M.S. HAYES 811	* 275 JANE ADDAMS 815	026 AVIATION 816	804 HEALTH CAR. 817	* 801 CLEV .ART4-6& 849	802 CLEV .SCIENCE 850	ROW TOTAL
1 BELOW TO ABOVE 3	22	5	44	31	23	44	25	194
	11.3	2.6	22.7	16.0	11.9	22.7	12.9	39.0
	31.4	31.3	36.7	50.0	46.0	34.9	47.2	
	4.4	1.0	8.9	6.2	4.6	8.9	5.0	
2 ABOVE TO BELOW 3	48	11	76	31	27	82	28	303
	15.8	3.6	25.1	10.2	8.9	27.1	9.2	61.0
	68.6	68.8	63.3	50.0	54.0	65.1	52.8	
	9.7	2.2	15.3	6.2	5.4	16.5	5.6	
COLUMN TOTAL	70	16	120	62	50	126	53	497
	14.1	3.2	24.1	12.5	10.1	25.4	10.7	100.0

RAW CHI SQUARE = 8.91391 WITH 6 DEGREES OF FREEDOM. SIGNIFICANCE = 0.1785
CRAMER'S V = 0.13392
CONTINGENCY COEFFICIENT = 0.13274
LAMBDA (ASYMMETRIC) = 0.0 WITH PARGROUP DEPENDENT. = 0.0 WITH TSCHNO DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.01334 WITH PARGROUP DEPENDENT. = 0.00494 WITH TSCHNO DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00721
KENDALL'S TAU B = -0.05153. SIGNIFICANCE = 0.0973
KENDALL'S TAU C = -0.06437. SIGNIFICANCE = 0.0973
CONDITIONAL GAMMA = -0.08207
SOMERS'S D (ASYMMETRIC) = -0.03927 WITH PARGROUP DEPENDENT. = -0.06762 WITH TSCHNO DEPENDENT.
SOMERS'S D (SYMMETRIC) = -0.04969
ETA = 0.13392 WITH PARGROUP DEPENDENT. = 0.03191 WITH TSCHNO DEPENDENT.
PEARSON'S R = -0.01618 SIGNIFICANCE = 0.3595

SUMMARY GAMMAS FOR CROSSTABULATION OF PARGROUP BY TSCHNO
ZERO-ORDER GAMMA = -0.03065
FIRST-ORDER PARTIAL GAMMA = -0.02599

NUMBER OF MISSING OBSERVATIONS =110946

* CROSSTABULATION INDEX *

PAGE	TABLE
697	PARGROUP BY CSCHLEV
698	PARGROUP BY TSCHNO BY CSCHLEV

Appendix B

* * * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F *
CSCHLEV
BY T2GRP3 IND.STUDENT PST.COMP.SCR.BASED 33% GRPS.
* PAGE 1 OF 1

CSCHLEV (COUNT / ROW PCT / COL PCT / TOT PCT)	T2GRP3: LO 33%TILE GRP-C 1	MID.33%TILE GRP- 2	HI 33%TILE GRP-C 3	ROW TOTAL
3 PUBLIC ELEMENTAR	10074	12554	7977	30605
	32.9	41.0	25.1	58.7
	52.3	58.8	69.0	
	19.3	24.1	15.3	
4 PUBLIC JUNIOR HS	3661	3087	1156	7904
	46.3	39.1	14.6	15.2
	19.0	14.5	10.0	
	7.0	5.9	2.2	
5 PUBLIC SENIOR HS	4788	4571	1799	11158
	42.9	41.0	16.1	21.4
	24.9	21.4	15.6	
	9.2	8.8	3.4	
6 SPECIAL SCHS&INS	732	1130	637	2499
	29.3	45.2	25.5	4.8
	3.8	5.3	5.5	
	1.4	2.2	1.2	
COLUMN TOTAL	19255	21342	11569	52166
	36.9	40.9	22.2	100.0

RAW CHI SQUARE = 1096.58350 WITH 6 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0
CRAMER'S V = 0.10252
CONTINGENCY COEFFICIENT = 0.14349
LAMBDA (ASYMMETRIC) = 0.0 WITH CSCHLEV DEPENDENT. = 0.02566 WITH T2GRP3 DEPENDENT.
LAMBDA (SYMMETRIC) = 0.01510
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.01000 WITH CSCHLEV DEPENDENT. = 0.01006 WITH T2GRP3 DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.01003
KENDALL'S TAU B = -0.09176. SIGNIFICANCE = 0.0000
KENDALL'S TAU C = -0.08468. SIGNIFICANCE = 0.0000
GAMMA = -0.14950
SOMERS'S D (ASYMMETRIC) = -0.08723 WITH CSCHLEV DEPENDENT. = -0.09653 WITH T2GRP3 DEPENDENT.
SOMERS'S D (SYMMETRIC) = -0.09164
ETA = 0.08798 WITH CSCHLEV DEPENDENT. = 0.14327 WITH T2GRP3 DEPENDENT.
PEARSON'S R = -0.08527 SIGNIFICANCE = 0.0000

NUMBER OF MISSING OBSERVATIONS = 70247

* C R O S S T A B U L A T I O N O F *
CCLUSTER SCHOOL CLUSTER FOR CURRENT YEAR--1981-82 BY T2GRP3 IND.STUDENT PST.COMP.SCR.BASED 33% GRPS.
* PAGE 1 OF 1

CCLUSTER	COUNT / ROW PCT / COL PCT / TOT PCT	T2GRP3: LO 33%TILE GRP-C 1	MID.33%TILE GRP- 2	HI 33%TILE GRP-C 3	ROW TOTAL
COLLINWOOD 01	1	1386	1606	827	3819
		36.3	42.1	21.7	7.4
		7.2	7.6	7.2	
		2.7	3.1	1.6	
EAST 02	2	2542	2726	1486	6754
		37.6	40.4	22.0	13.0
		13.3	12.8	12.9	
		4.9	5.3	2.9	
ADAMS-RHODES 03	3	2626	3223	1758	7607
		34.5	42.4	23.1	14.7
		13.7	15.2	15.2	
		5.1	6.2	3.4	
KENNEDY-MARSHALL	4	2691	3577	2374	8642
		31.1	41.4	27.5	16.6
		14.0	16.9	20.6	
		5.2	6.9	4.6	
EAST TECH-SOUTH	5	2978	2652	1112	6742
		44.2	39.3	16.5	13.0
		15.5	12.5	9.6	
		5.7	5.1	2.1	
GLENVILLE-LNCLN	6	3052	3196	1701	7949
		38.4	40.2	21.4	15.3
		15.9	15.1	14.8	
		5.9	6.2	3.3	
HAY-WEST TECH 0	7	3883	4244	2270	10397
		37.3	40.8	21.8	20.0
		20.3	20.0	19.7	
		7.5	8.2	4.4	
COLUMN TOTAL		19158	21224	11528	51910
		36.9	40.9	22.2	100.0

RAW CHI SQUARE = 417.29688 WITH 12 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0
CRAMER'S V = 0.06340
CONTINGENCY COEFFICIENT = 0.08930
LAMBDA (ASYMMETRIC) = 0.00251 WITH CCLUSTER DEPENDENT. = 0.01062 WITH T2GRP3 DEPENDENT.
LAMBDA (SYMMETRIC) = 0.00596
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00211 WITH CCLUSTER DEPENDENT. = 0.00378 WITH T2GRP3 DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00271

KENDALL'S TAU B = -0.01825. SIGNIFICANCE = 0.0000
KENDALL'S TAU C = -0.02028. SIGNIFICANCE = 0.0000
GAMMA = -0.02462
SOMERS'S D (ASYMMETRIC) = -0.02089 WITH CCLUSTER DEPENDENT. = -0.01594 WITH T2GRP3 DEPENDENT.
SOMERS'S D (SYMMETRIC) = -0.01808
ETA = 0.02208 WITH CCLUSTER DEPENDENT. = 0.08867 WITH T2GRP3 DEPENDENT.
PEARSON'S R =-0.02155 SIGNIFICANCE = 0.0000

NUMBER OF MISSING OBSERVATIONS = 70503

* * * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * * *
TGRADE BY T2GRP3 IND.STUDENT PST.COMP.SCR.BASED 33% GRPS.
* PAGE 1 OF 2

TGRADE	T2GRP3 COUNT ROW PCT COL PCT TOT PCT	LO 33%TILE GRP-C 1	MID.33%TILE GRP- 2	HI 33%TILE GRP-C 3	ROW TOTAL
1		2029 31.1 10.4 3.8	1924 29.5 8.9 3.6	2564 39.3 21.9 4.9	6517 12.3
2		1989 35.0 10.2 3.8	2306 40.5 10.7 4.4	1393 24.5 11.9 2.6	5688 10.8
3		1584 30.8 8.1 3.0	2236 43.5 10.4 4.2	1317 25.6 11.2 2.5	5137 9.7
4		1644 33.1 8.4 3.1	2239 45.1 10.4 4.2	1078 21.7 9.2 2.0	4961 9.4
5		1655 36.2 8.5 3.1	2078 45.5 9.6 3.9	838 18.3 7.2 1.6	4571 8.7
6		1300 29.8 6.7 2.5	2028 46.5 9.4 3.8	1036 23.7 8.8 2.0	4364 8.3
7		1752 42.2 9.0 3.3	1829 44.0 8.5 3.5	572 13.8 4.9 1.1	4153 7.9
8		2038 46.7 10.5 3.9	1575 36.1 7.3 3.0	754 17.3 6.4 1.4	4367 8.3
	COLUMN TOTAL	19473 36.9	21599 40.9	11718 22.2	52790 100.0

(CONTINUED)

* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * * *
TGRADE BY T2GRP3 IND.STUDENT PST.COMP.SCR.BASED 33% GRPS.
* PAGE 2 OF 2

TGRADE	T2GRP3: COUNT / ROW PCT / COL PCT / TOT PCT	LO 33%TILE GRP-C 1	MID.33%TILE GRP- 2	HI 33%TILE GRP-C 3	ROW TOTAL
9	COUNT	1755	1507	599	3861
	ROW PCT	45.5	39.0	15.5	7.3
	COL PCT	9.0	7.0	5.1	
	TOT PCT	3.3	2.9	1.1	
10	COUNT	1614	1490	561	3665
	ROW PCT	44.0	40.7	15.3	6.9
	COL PCT	8.3	6.9	4.8	
	TOT PCT	3.1	2.8	1.1	
11	COUNT	1342	1350	525	3217
	ROW PCT	41.7	42.0	16.3	6.1
	COL PCT	6.9	6.3	4.5	
	TOT PCT	2.5	2.6	1.0	
12	COUNT	771	1037	481	2289
	ROW PCT	33.7	45.3	21.0	4.3
	COL PCT	4.0	4.8	4.1	
	TOT PCT	1.5	2.0	0.9	
COLUMN TOTAL		19473	21599	11718	52790
		36.9	40.9	22.2	100.0

RAW CHI SQUARE = 2164.67114 WITH 22 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0
CRAMER'S V = 0.14319
CONTINGENCY COEFFICIENT = 0.19847
LAMBDA (ASYMMETRIC) = 0.00845 WITH TGRADE DEPENDENT. = 0.04729 WITH T2GRP3 DEPENDENT.
LAMBDA (SYMMETRIC) = 0.02409
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00796 WITH TGRADE DEPENDENT. = 0.01831 WITH T2GRP3 DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.01110
KENDALL'S TAU B = -0.10499. SIGNIFICANCE = 0.0000
KENDALL'S TAU C = -0.12098. SIGNIFICANCE = 0.0000
GAMMA = -0.13650
SOMERS'S D (ASYMMETRIC) = -0.12461 WITH TGRADE DEPENDENT. = -0.08847 WITH T2GRP3 DEPENDENT.
SOMERS'S D (SYMMETRIC) = -0.10347
ETA = 0.13988 WITH TGRADE DEPENDENT. = 0.16451 WITH T2GRP3 DEPENDENT.
PEARSON'S R = -0.12827 SIGNIFICANCE = 0.0000

NUMBER OF MISSING OBSERVATIONS = 69623

* C R O S S T A B U L A T I O N O F *
RACE RACE OF STUDENT 1=I 2=W 3=B 4=O 5=H BY T2GRP3 IND.STUDENT PST.COMP.SCR.BASED 33% GRPS.
* PAGE 1 OF 1

RACE	COUNT / ROW PCT / COL PCT / TOT PCT	T2GRP3: LO 33%TILE GRP-C 1	MID.33%TILE GRP- 2	HI 33%TILE GRP-C 3	ROW TOTAL
1 AMER IND OR ESKI	COUNT	41	57	24	122
	ROW PCT	33.6	46.7	19.7	0.2
	COL PCT	0.2	0.3	0.2	
	TOT PCT	0.1	0.1	0.0	
2 WHITE-NOT OF HIS	COUNT	3580	4771	3558	11909
	ROW PCT	30.1	40.1	29.9	22.6
	COL PCT	18.4	22.1	30.4	
	TOT PCT	6.8	9.0	6.7	
3 BLACK-NOT OF HIS	COUNT	14923	15802	7639	38364
	ROW PCT	38.9	41.2	19.9	72.7
	COL PCT	76.7	73.2	65.3	
	TOT PCT	28.3	29.9	14.5	
4 ASIAN OR PAC ISL	COUNT	140	178	142	460
	ROW PCT	30.4	38.7	30.9	0.9
	COL PCT	0.7	0.8	1.2	
	TOT PCT	0.3	0.3	0.3	
5 HISPANIC	COUNT	784	784	343	1911
	ROW PCT	41.0	41.0	17.9	3.6
	COL PCT	4.0	3.6	2.9	
	TOT PCT	1.5	1.5	0.7	
COLUMN TOTAL		19468	21592	11706	52766
		36.9	40.9	22.2	100.0

RAW CHI SQUARE = 649.63257 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0
CRAMER'S V = 0.07846
CONTINGENCY COEFFICIENT = 0.11028
LAMBDA (ASYMMETRIC) = 0.0 WITH RACE DEPENDENT. = 0.0 WITH T2GRP3 DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00804 WITH RACE DEPENDENT. = 0.00560 WITH T2GRP3 DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00660
KENDALL'S TAU B = -0.08791. SIGNIFICANCE = 0.0000
KENDALL'S TAU C = -0.06867. SIGNIFICANCE = 0.0000
GAMMA = -0.16664
SOMERS'S D (ASYMMETRIC) = -0.07074 WITH RACE DEPENDENT. = -0.10925 WITH T2GRP3 DEPENDENT.
SOMERS'S D (SYMMETRIC) = -0.08587
ETA = 0.08437 WITH RACE DEPENDENT. = 0.10723 WITH T2GRP3 DEPENDENT.
PEARSON'S R =-0.08226 SIGNIFICANCE = 0.0000

NUMBER OF MISSING OBSERVATIONS = 69647

* C R O S S T A B U L A T I O N O F *
BIRACE BLACK=5 WHITE=6 MISSING DATA=-999 BY T2GRP3 IND.STUDENT PST.COMP.SCR.BASED 33% GRPS.
* PAGE 1 OF 1

BIRACE	T2GRP3: COUNT / ROW PCT / COL PCT / TOT PCT	LO 33%TILE GRP-C 1	MID.33%TILE GRP- 2	HI 33%TILE GRP-C 3	ROW TOTAL
BLACK--NONHISPAN	5	14923	15802	7639	38364
		38.9	41.2	19.9	76.3
		80.7	76.8	68.2	
		29.7	31.4	15.2	
WHITE--NONHISPAN	6	3580	4771	3558	11909
		30.1	40.1	29.9	23.7
		19.3	23.2	31.8	
		7.1	9.5	7.1	
COLUMN TOTAL		18503	20573	11197	50273
		36.8	40.9	22.3	100.0

RAW CHI SQUARE = 600.81104 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0
CRAMER'S V = 0.10932
CONTINGENCY COEFFICIENT = 0.10867
LAMBDA (ASYMMETRIC) = 0.0 WITH BIRACE DEPENDENT. = 0.0 WITH T2GRP3 DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.01060 WITH BIRACE DEPENDENT. = 0.00543 WITH T2GRP3 DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00718
KENDALL'S TAU B = 0.09838. SIGNIFICANCE = 0.0000
KENDALL'S TAU C = 0.09520. SIGNIFICANCE = 0.0000
GAMMA = 0.19992
SOMERS'S D (ASYMMETRIC) = 0.07352 WITH BIRACE DEPENDENT. = 0.13166 WITH T2GRP3 DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.09435
ETA = 0.10973 WITH BIRACE DEPENDENT. = 0.10591 WITH T2GRP3 DEPENDENT.
PEARSON'S R = 0.10592 SIGNIFICANCE = 0.0000

NUMBER OF MISSING OBSERVATIONS = 72140

* C R O S S T A B U L A T I O N O F *
ADVERSE ADVERSELY AFFECTED STUDENTS INDICATOR BY T2GRP3 IND.STUDENT PST.COMP.SCR.BASED 33% GRPS.
* PAGE 1 OF 1

ADVERSE	COUNT / ROW PCT / COL PCT / TOT PCT	T2GRP3: LO 33%TILE GRP-C 1	MID.33%TILE GRP- 2	HI 33%TILE GRP-C 3	ROW TOTAL
NON-ADV.AFFECTED	0	17512	20982	11644	50138
		34.9	41.8	23.2	95.0
		89.9	97.1	99.4	
		33.2	39.7	22.1	
ADV.AFFECTED GRP	1	1961	617	74	2652
		73.9	23.3	2.8	5.0
		10.1	2.9	0.6	
		3.7	1.2	0.1	
	COLUMN TOTAL	19473	21599	11718	52790
		36.9	40.9	22.2	100.0

RAW CHI SQUARE = 1725.82373 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0
CRAMER'S V = 0.18081
CONTINGENCY COEFFICIENT = 0.17792
LAMBDA (ASYMMETRIC) = 0.0 WITH ADVERSE DEPENDENT. = 0.04309 WITH T2GRP3 DEPENDENT.
LAMBDA (SYMMETRIC) = 0.03971
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.08611 WITH ADVERSE DEPENDENT. = 0.01607 WITH T2GRP3 DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.02708
KENDALL'S TAU B = -0.16607. SIGNIFICANCE = 0.0000
KENDALL'S TAU C = -0.08255. SIGNIFICANCE = 0.0000
GAMMA = -0.67805
SOMERS'S D (ASYMMETRIC) = -0.06377 WITH ADVERSE DEPENDENT. = -0.43252 WITH T2GRP3 DEPENDENT.
SOMERS'S D (SYMMETRIC) = -0.11115
ETA = 0.18081 WITH ADVERSE DEPENDENT. = 0.17211 WITH T2GRP3 DEPENDENT.
PEARSON'S R = -0.17211 SIGNIFICANCE = 0.0000

NUMBER OF MISSING OBSERVATIONS = 69623

* C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * *
GAINGRP BY T2GRP3 IND.STUDENT PST.COMP.SCR.BASED 33% GRPS.
* PAGE 1 OF 1

GAINGRP	T2GRP3 COUNT / ROW PCT / COL PCT / TOT PCT	LO 33%TILE GRP-C 1	MID.33%TILE GRP- 2	HI 33%TILE GRP-C 3	ROW TOTAL
D2NCE LE -7	1	9786 51.1 65.6 23.8	7572 39.5 42.6 18.4	1801 9.4 21.4 4.4	19159 46.6
D2NCE -7 TO +7	2	3794 26.6 25.4 9.2	7344 51.4 41.3 17.9	3139 22.0 37.3 7.6	14277 34.7
D2NCE GE 7	3	1337 17.4 9.0 3.3	2873 37.4 16.2 7.0	3469 45.2 41.3 8.4	7679 18.7
	COLUMN TOTAL	14917 36.3	17789 43.3	8409 20.5	41115 100.0

RAW CHI SQUARE = 6079.42188 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0
CRAMER'S V = 0.27190
CONTINGENCY COEFFICIENT = 0.35891
LAMBDA (ASYMMETRIC) = 0.07597 WITH GAINGRP DEPENDENT. = 0.12047 WITH T2GRP3 DEPENDENT.
LAMBDA (SYMMETRIC) = 0.09889
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.06871 WITH GAINGRP DEPENDENT. = 0.06751 WITH T2GRP3 DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.06811
KENDALL'S TAU B = 0.32634. SIGNIFICANCE = 0.0000
KENDALL'S TAU C = 0.31003. SIGNIFICANCE = 0.0000
GAMMA = 0.49384
SOMERS'S D (ASYMMETRIC) = 0.32328 WITH GAINGRP DEPENDENT. = 0.32943 WITH T2GRP3 DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.32633
ETA = 0.36522 WITH GAINGRP DEPENDENT. = 0.36189 WITH T2GRP3 DEPENDENT.
PEARSON'S R = 0.36158 SIGNIFICANCE = 0.0000

NUMBER OF MISSING OBSERVATIONS = 81298

Appendix C

* C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * * *
ADVERSE ADVERSELY AFFECTED STUDENTS INDICATOR BY SEX SEX OF STUDENT--AS CURRENTLY LISTED--M F
* PAGE 1 OF 1

ADVERSE	SEX COUNT ROW PCT COL PCT TOT PCT	MALE 1	FEMALE 2	ROW TOTAL
NON-ADV.AFFECTED	0	57386 51.8 90.6 47.4	53487 48.2 92.5 44.1	110873 91.5
ADV.AFFECTED GRP	1	5937 57.7 9.4 4.9	4346 42.3 7.5 3.6	10283 8.5
	COLUMN TOTAL	63323 52.3	57833 47.7	121156 100.0

CORRECTED CHI SQUARE = 134.54071 WITH 1 DEGREE OF FREEDOM. SIGNIFICANCE = 0.0000
RAW CHI SQUARE = 134.78171 WITH 1 DEGREE OF FREEDOM. SIGNIFICANCE = 0.0000
PHI = 0.03335
CONTINGENCY COEFFICIENT = 0.03334
LAMBDA (ASYMMETRIC) = 0.0 WITH ADVERSE DEPENDENT. = 0.0 WITH SEX DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00192 WITH ADVERSE DEPENDENT. = 0.00081 WITH SEX DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00114
KENDALL'S TAU B = -0.03335. SIGNIFICANCE = 0.0000
KENDALL'S TAU C = -0.01857. SIGNIFICANCE = 0.0000
GAMMA = -0.12021
SOMERS'S D (ASYMMETRIC) = -0.01861 WITH ADVERSE DEPENDENT. = -0.05978 WITH SEX DEPENDENT.
SOMERS'S D (SYMMETRIC) = -0.02838
ETA = 0.03336 WITH ADVERSE DEPENDENT. = 0.03337 WITH SEX DEPENDENT.
PEARSON'S R = -0.03335 SIGNIFICANCE = 0.0000

NUMBER OF MISSING OBSERVATIONS = 1257

86-87 DISCREPANT READING STUDY--ANALYSIS BY JIM ZAFIRAU, PH.D.
FILE PRPSTAPR (CREATION DATE = 02/14/88) 1985-86 PRE&1986-87 POST CTBS READING WITH 1986-87 APR

* C R O S S T A B U L A T I O N O F *
T2GRP3 IND.STUDENT PST.COMP.SCR.BASED 33% GRPS. BY SEX SEX OF STUDENT--AS CURRENTLY LISTED--M F
CONTROLLING FOR..
RACE RACE OF STUDENT 1=I 2=W 3=B 4=O 5=H VALUE.. 1 AMER IND OR ESKIMO
* PAGE 1 OF 1

T2GRP3	COUNT / ROW PCT / COL PCT / TOT PCT	SEX: MALE 1	FEMALE 2	ROW TOTAL
LO 33%TILE GRP-C	1	31	10	41
		75.6	24.4	33.6
		44.9	18.9	
		25.4	8.2	
MID.33%TILE GRP-	2	27	30	57
		47.4	52.6	46.7
		39.1	56.6	
		22.1	24.6	
HI 33%TILE GRP-C	3	11	13	24
		45.8	54.2	19.7
		15.9	24.5	
		9.0	10.7	
COLUMN TOTAL		69	53	122
		56.6	43.4	100.0

RAW CHI SQUARE = 9.13949 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0104
CRAMER'S V = 0.27370
CONTINGENCY COEFFICIENT = 0.26399
LAMBDA (ASYMMETRIC) = 0.06154 WITH T2GRP3 DEPENDENT. = 0.09434 WITH SEX DEPENDENT.
LAMBDA (SYMMETRIC) = 0.07627
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.03739 WITH T2GRP3 DEPENDENT. = 0.05691 WITH SEX DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.04513
KENDALL'S TAU B = 0.23521. SIGNIFICANCE = 0.0032
KENDALL'S TAU C = 0.26176. SIGNIFICANCE = 0.0032
CONDITIONAL GAMMA = 0.40685
SOMERS'S D (ASYMMETRIC) = 0.26634 WITH T2GRP3 DEPENDENT. = 0.20772 WITH SEX DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.23341
ETA = 0.23969 WITH T2GRP3 DEPENDENT. = 0.27370 WITH SEX DEPENDENT.
PEARSON'S R = 0.23968 SIGNIFICANCE = 0.0039

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* * * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * * * *
     T2GRP3    IND.STUDENT PST.COMP.SCR.BASED 33% GRPS.     BY  SEX        SEX OF STUDENT--AS CURRENTLY LISTED--M F
CONTROLLING FOR..
     RACE       RACE OF STUDENT  1=I 2=W 3=B 4=O 5=H              VALUE..     2   WHITE-NOT OF HISP OR
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                         SEX
               COUNT   I
              ROW PCT  IMALE       FEMALE      ROW
              COL PCT  I                       TOTAL
              TOT PCT  I       1  I       2  I
T2GRP3        ---------I----------I----------I
                   1   I  2052    I  1528    I   3580
  LO 33%TILE GRP-C     I  57.3    I  42.7    I   30.1
                       I  32.8    I  27.0    I
                       I  17.2    I  12.8    I
                      -I----------I----------I
                   2   I  2394    I  2377    I   4771
  MID.33%TILE GRP-     I  50.2    I  49.8    I   40.1
                       I  38.3    I  42.0    I
                       I  20.1    I  20.0    I
                      -I----------I----------I
                   3   I  1801    I  1757    I   3558
  HI 33%TILE GRP-C     I  50.6    I  49.4    I   29.9
                       I  28.8    I  31.0    I
                       I  15.1    I  14.8    I
                      -I----------I----------I
              COLUMN      6247       5662       11909
              TOTAL       52.5       47.5       100.0

RAW CHI SQUARE =    48.68256 WITH     2 DEGREES OF FREEDOM.  SIGNIFICANCE =  0.0000
CRAMER'S V =  0.06394
CONTINGENCY COEFFICIENT =  0.06381
LAMBDA (ASYMMETRIC) =  0.0     WITH T2GRP3   DEPENDENT.          =  0.0     WITH SEX      DEPENDENT.
LAMBDA (SYMMETRIC) =  0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) =  0.00188 WITH T2GRP3   DEPENDENT.          =  0.00296 WITH SEX      DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) =  0.00230
KENDALL'S TAU B =  0.04912.    SIGNIFICANCE =  0.0000
KENDALL'S TAU C =  0.05636.    SIGNIFICANCE =  0.0000
CONDITIONAL GAMMA =  0.08547
SOMERS'S D (ASYMMETRIC) =  0.05650 WITH T2GRP3   DEPENDENT.          =  0.04270 WITH SEX      DEPENDENT.
SOMERS'S D (SYMMETRIC) =  0.04864
ETA =  0.05202 WITH T2GRP3   DEPENDENT.          =  0.06397 WITH SEX      DEPENDENT.
PEARSON'S R = 0.05201  SIGNIFICANCE =  0.0000
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* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * *
T2GRP3 IND.STUDENT PST.COMP.SCR.BASED 33% GRPS. BY SEX SEX OF STUDENT--AS CURRENTLY LISTED--M F
CONTROLLING FOR..
RACE RACE OF STUDENT 1=I 2=W 3=B 4=O 5=H VALUE.. 3 BLACK-NOT OF HISP OR
* PAGE 1 OF 1

T2GRP3 (COUNT / ROW PCT / COL PCT / TOT PCT)	SEX: MALE 1	FEMALE 2	ROW TOTAL
1 LO 33%TILE GRP-C	8246 55.3 43.1 21.5	6677 44.7 34.7 17.4	14923 38.9
2 MID.33%TILE GRP-	7534 47.7 39.4 19.6	8268 52.3 43.0 21.6	15802 41.2
3 HI 33%TILE GRP-C	3358 44.0 17.5 8.8	4281 56.0 22.3 11.2	7639 19.9
COLUMN TOTAL	19138 49.9	19226 50.1	38364 100.0

RAW CHI SQUARE = 310.38110 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0
CRAMER'S V = 0.08995
CONTINGENCY COEFFICIENT = 0.08959
LAMBDA (ASYMMETRIC) = 0.03156 WITH T2GRP3 DEPENDENT. = 0.08198 WITH SEX DEPENDENT.
LAMBDA (SYMMETRIC) = 0.05470
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00385 WITH T2GRP3 DEPENDENT. = 0.00585 WITH SEX DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00464
KENDALL'S TAU B = 0.08470. SIGNIFICANCE = 0.0000
KENDALL'S TAU C = 0.09578. SIGNIFICANCE = 0.0000
CONDITIONAL GAMMA = 0.14919
SOMERS'S D (ASYMMETRIC) = 0.09578 WITH T2GRP3 DEPENDENT. = 0.07490 WITH SEX DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.08406
ETA = 0.08803 WITH T2GRP3 DEPENDENT. = 0.08997 WITH SEX DEPENDENT.
PEARSON'S R = 0.08801 SIGNIFICANCE = 0.0000

BOARD OF EDUCATION-CLEVELAND CITY SCHOOL DISTRICT
86-87 DISCREPANT READING STUDY--ANALYSIS BY JIM ZAFIRAU, PH.D.
FILE PRPSTAPR (CREATION DATE = 02/14/98) 1985-86 PRE&1986-87 POST CTBS READING WITH 1986-87 APR

* * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * * *
T2GRP3 IND.STUDENT PST.COMP.SCR.BASED 33% GRPS. BY SEX SEX OF STUDENT--AS CURRENTLY LISTED--M F
CONTROLLING FOR..
RACE RACE OF STUDENT 1=I 2=W 3=B 4=O 5=H VALUE.. 4 ASIAN OR PAC ISLNDR
* PAGE 1 OF 1

T2GRP3 (COUNT / ROW PCT / COL PCT / TOT PCT)	SEX: MALE 1	FEMALE 2	ROW TOTAL
1 LO 33%TILE GRP-C	80	60	140
	57.1	42.9	30.4
	31.0	29.7	
	17.4	13.0	
2 MID.33%TILE GRP-	105	73	178
	59.0	41.0	38.7
	40.7	36.1	
	22.8	15.9	
3 HI 33%TILE GRP-C	73	69	142
	51.4	48.6	30.9
	28.3	34.2	
	15.9	15.0	
COLUMN TOTAL	258	202	460
	56.1	43.9	100.0

RAW CHI SQUARE = 1.93389 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = 0.3802
CRAMER'S V = 0.06484
CONTINGENCY COEFFICIENT = 0.06470
LAMBDA (ASYMMETRIC) = 0.0 WITH T2GRP3 DEPENDENT. = 0.0 WITH SEX DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00192 WITH T2GRP3 DEPENDENT. = 0.00306 WITH SEX DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00236
KENDALL'S TAU B = 0.04296. SIGNIFICANCE = 0.1647
KENDALL'S TAU C = 0.04907. SIGNIFICANCE = 0.1647
CONDITIONAL GAMMA = 0.07500
SOMERS'S D (ASYMMETRIC) = 0.04981 WITH T2GRP3 DEPENDENT. = 0.03705 WITH SEX DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.04249
ETA = 0.04543 WITH T2GRP3 DEPENDENT. = 0.06481 WITH SEX DEPENDENT.
PEARSON'S R = 0.04544 SIGNIFICANCE = 0.1654

* C R O S S T A B U L A T I O N O F *
T2GRP3 IND.STUDENT PST.COMP.SCP.BASED 33% GRPS. BY SEX SEX OF STUDENT--AS CURRENTLY LISTED--M F
CONTROLLING FOR..
RACE RACE OF STUDENT 1=I 2=W 3=B 4=O 5=H VALUE.. 5 HISPANIC
* PAGE 1 OF 1

T2GRP3 (COUNT / ROW PCT / COL PCT / TOT PCT)	SEX: MALE 1	FEMALE 2	ROW TOTAL
1 LO 33%TILE GRP-C	407 51.9 42.9 21.3	377 48.1 39.1 19.7	784 41.0
2 MID.33%TILE GRP-	365 46.6 38.5 19.1	419 53.4 43.5 21.9	784 41.0
3 HI 33%TILE GRP-C	176 51.3 18.6 9.2	167 48.7 17.3 8.7	343 17.9
COLUMN TOTAL	948 49.6	963 50.4	1911 100.0

RAW CHI SQUARE = 4.98606 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0827
CRAMER'S V = 0.05108
CONTINGENCY COEFFICIENT = 0.05101
LAMBDA (ASYMMETRIC) = 0.03727 WITH T2GRP3 DEPENDENT. = 0.04114 WITH SEX DEPENDENT.
LAMBDA (SYMMETRIC) = 0.03904
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00126 WITH T2GRP3 DEPENDENT. = 0.00188 WITH SEX DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00151
KENDALL'S TAU B = 0.02121. SIGNIFICANCE = 0.1648
KENDALL'S TAU C = 0.02383. SIGNIFICANCE = 0.1648
CONDITIONAL GAMMA = 0.03770
SOMERS'S D (ASYMMETRIC) = 0.02383 WITH T2GRP3 DEPENDENT. = 0.01888 WITH SEX DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.02107
ETA = 0.01757 WITH T2GRP3 DEPENDENT. = 0.05111 WITH SEX DEPENDENT.
PEARSON'S R = 0.01748 SIGNIFICANCE = 0.2225

SUMMARY GAMMAS FOR CROSSTABULATION OF T2GRP3 BY SEX
ZERO-ORDER GAMMA = 0.12553
FIRST-ORDER PARTIAL GAMMA = 0.14321

NUMBER OF MISSING OBSERVATIONS = 69647

Appendix D

* C R O S S T A B U L A T I O N O F *
PERFORM PROJECT PERFORM SCHOOL DESIGNATION VAR. BY RACE RACE OF STUDENT 1=I 2=W 3=B 4=O 5=H
CONTROLLING FOR..
CSCHLEV VALUE.. 3 PUBLIC ELEMENTARY
* PAGE 1 OF 1

PERFORM	COUNT / ROW PCT / COL PCT / TOT PCT	RACE: AMER IND OR ESKI 1	WHITE-NO T OF HIS 2	BLACK-NO T OF HIS 3	ASIAN OR PAC ISL 4	HISPANIC 5	ROW TOTAL
PROJECT PERFORM	1	17	2056	6118	64	541	8796
		0.2	23.4	69.6	0.7	6.2	18.8
		15.5	18.1	18.8	12.3	25.1	
		0.0	4.4	13.1	0.1	1.2	
NON-PROJ.PERFORM	2	93	9302	26420	457	1611	37883
		0.2	24.6	69.7	1.2	4.3	81.2
		84.5	81.9	81.2	87.7	74.9	
		0.2	19.9	56.6	1.0	3.5	
	COLUMN TOTAL	110	11358	32538	521	2152	46679
		0.2	24.3	69.7	1.1	4.6	100.0

RAW CHI SQUARE = 75.38518 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0000
CRAMER'S V = 0.04019
CONTINGENCY COEFFICIENT = 0.04015
LAMBDA (ASYMMETRIC) = 0.0 WITH PERFORM DEPENDENT. = 0.0 WITH RACE DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00162 WITH PERFORM DEPENDENT. = 0.00098 WITH RACE DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00122
KENDALL'S TAU B = -0.01879. SIGNIFICANCE = 0.0000
KENDALL'S TAU C = -0.01398. SIGNIFICANCE = 0.0000
CONDITIONAL GAMMA = -0.05025
SOMERS'S D (ASYMMETRIC) = -0.01544 WITH PERFORM DEPENDENT. = -0.02286 WITH RACE DEPENDENT.
SOMERS'S D (SYMMETRIC) = -0.01843
ETA = 0.04023 WITH PERFORM DEPENDENT. = 0.02753 WITH RACE DEPENDENT.
PEARSON'S R = -0.02752 SIGNIFICANCE = 0.0000

* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * *

PERFORM PROJECT PERFORM SCHOOL DESIGNATION VAR. BY RACE RACE OF STUDENT 1=I 2=W 3=B 4=O 5=H

CONTROLLING FOR..
CSCHLEV VALUE.. 4 PUBLIC JUNIOR HS

* PAGE 1 OF 1

PERFORM	RACE: COUNT / ROW PCT / COL PCT / TOT PCT	AMER IND OR ESKI 1	WHITE-NOT OF HIS 2	BLACK-NOT OF HIS 3	ASIAN OR PAC ISL 4	HISPANIC 5	ROW TOTAL
1 PROJECT PERFORM	COUNT	2	492	1317	5	30	1846
	ROW PCT	0.1	26.7	71.3	0.3	1.6	17.5
	COL PCT	8.3	18.7	18.1	5.0	5.7	
	TOT PCT	0.0	4.7	12.5	0.0	0.3	
2 NON-PROJ.PERFORM	COUNT	22	2145	5962	96	500	8725
	ROW PCT	0.3	24.6	68.3	1.1	5.7	82.5
	COL PCT	91.7	81.3	81.9	95.0	94.3	
	TOT PCT	0.2	20.3	55.4	0.9	4.7	
COLUMN TOTAL		24	2637	7279	101	530	10571
		0.2	24.9	68.9	1.0	5.0	100.0

1 OUT OF 10 (10.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 4.191
RAW CHI SQUARE = 68.19818 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0000
CRAMER'S V = 0.08032
CONTINGENCY COEFFICIENT = 0.08006
LAMBDA (ASYMMETRIC) = 0.0 WITH PERFORM DEPENDENT. = 0.0 WITH RACE DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00886 WITH PERFORM DEPENDENT. = 0.00506 WITH RACE DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00644
KENDALL'S TAU B = 0.04317. SIGNIFICANCE = 0.0000
KENDALL'S TAU C = 0.03147. SIGNIFICANCE = 0.0000
CONDITIONAL GAMMA = 0.12239
SOMERS'S D (ASYMMETRIC) = 0.03413 WITH PERFORM DEPENDENT. = 0.05459 WITH RACE DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.04200
ETA = 0.08031 WITH PERFORM DEPENDENT. = 0.06134 WITH RACE DEPENDENT.
PEARSON'S R = 0.06139 SIGNIFICANCE = 0.0000

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* * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * * *
    PERFORM   PROJECT PERFORM SCHOOL DESIGNATION VAR.      BY  SEX       SEX OF STUDENT--AS CURRENTLY LISTED--M F
CONTROLLING FOR..
    CSCHLEV                                                VALUE..    3   PUBLIC ELEMENTARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                       SEX
              COUNT  I
            ROW PCT  IMALE      FEMALE      ROW
            COL PCT  I                      TOTAL
            TOT PCT  I      1  I      2  I
PERFORM     --------I--------I--------I
                   1 I  4600  I  4201  I   8801
   PROJECT PERFORM  I  52.3  I  47.7  I   18.8
                    I  18.9  I  18.7  I
                    I   9.8  I   9.0  I
                   -I--------I--------I
                   2 I 19688  I 18215  I  37903
   NON-PROJ.PERFORM I  51.9  I  48.1  I   81.2
                    I  81.1  I  81.3  I
                    I  42.2  I  39.0  I
                   -I--------I--------I
            COLUMN    24288     22416      46704
             TOTAL     52.0      48.0      100.0

CORRECTED CHI SQUARE =      0.28696 WITH 1 DEGREE OF FREEDOM.  SIGNIFICANCE =  0.5922
      RAW CHI SQUARE =      0.29981 WITH 1 DEGREE OF FREEDOM.  SIGNIFICANCE =  0.5840
PHI =    0.00253
CONTINGENCY COEFFICIENT =  0.00253
LAMBDA (ASYMMETRIC) =  0.0      WITH PERFORM  DEPENDENT.          =  0.0     WITH SEX      DEPENDENT.
LAMBDA (SYMMETRIC) =  0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) =  0.00001 WITH PERFORM  DEPENDENT.         =  0.00001 WITH SEX      DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) =  0.00001
KENDALL'S TAU B =  0.00253.    SIGNIFICANCE =  0.2920
KENDALL'S TAU C =  0.00198.    SIGNIFICANCE =  0.2920
CONDITIONAL GAMMA =  0.00648
SOMERS'S D (ASYMMETRIC) =  0.00198 WITH PERFORM  DEPENDENT.          =  0.00324 WITH SEX      DEPENDENT.
SOMERS'S D (SYMMETRIC) =  0.00246
ETA =  0.00296 WITH PERFORM  DEPENDENT.          =  0.00232 WITH SEX      DEPENDENT.
PEARSON'S R = 0.00254  SIGNIFICANCE =  0.2915
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* C R O S S T A B U L A T I O N O F *
PERFORM PROJECT PERFORM SCHOOL DESIGNATION VAR. BY SEX SEX OF STUDENT--AS CURRENTLY LISTED--M F
CONTROLLING FOR..
CSCHLEV VALUE.. 4 PUBLIC JUNIOR HS
* PAGE 1 OF 1

PERFORM	COUNT / ROW PCT / COL PCT / TOT PCT	SEX: MALE 1	FEMALE 2	ROW TOTAL
PROJECT PERFORM	1	1040 56.3 18.4 9.8	806 43.7 16.4 7.6	1846 17.5
NON-PROJ.PERFORM	2	4605 52.8 81.6 43.6	4122 47.2 83.6 39.0	8727 82.5
	COLUMN TOTAL	5645 53.4	4928 46.6	10573 100.0

CORRECTED CHI SQUARE = 7.66409 WITH 1 DEGREE OF FREEDOM. SIGNIFICANCE = 0.0056
RAW CHI SQUARE = 7.80687 WITH 1 DEGREE OF FREEDOM. SIGNIFICANCE = 0.0052
PHI = 0.02717
CONTINGENCY COEFFICIENT = 0.02716
LAMBDA (ASYMMETRIC) = 0.0 WITH PERFORM DEPENDENT. = 0.0 WITH SEX DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00080 WITH PERFORM DEPENDENT. = 0.00054 WITH SEX DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00064
KENDALL'S TAU B = 0.02717. SIGNIFICANCE = 0.0026
KENDALL'S TAU C = 0.02058. SIGNIFICANCE = 0.0026
CONDITIONAL GAMMA = 0.07192
SOMERS'S D (ASYMMETRIC) = 0.02068 WITH PERFORM DEPENDENT. = 0.03571 WITH SEX DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.02619
ETA = 0.02717 WITH PERFORM DEPENDENT. = 0.02719 WITH SEX DEPENDENT.
PEARSON'S R = 0.02717 SIGNIFICANCE = 0.0026

- T - T E S T -

GROUP 1 - PERFORM EQ 1.
GROUP 2 - PERFORM EQ 2.

VARIABLE		NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	F VALUE	2-TAIL PROB.	POOLED VARIANCE ESTIMATE T VALUE	DEGREES OF FREEDOM	2-TAIL PROB.	SEPARATE VARIANCE ESTIMATE T VALUE	DEGREES OF FREEDOM	2-TAIL PROB.
P1NCE PRE T CTBS VOCABULRY NCE													
	GROUP 1	3389	54.8595	16.620	0.285	1.09	0.003	-6.96	16730	0.000	-7.13	5411.47	0.000
	GROUP 2	13343	57.1605	17.324	0.150								
T1NCE POST T CTBS VOCABULRY NCE													
	GROUP 1	4614	44.8147	16.460	0.242	1.14	0.000	-8.74	24164	0.000	-9.11	7311.45	0.000
	GROUP 2	19552	47.3024	17.597	0.126								
D1NCE GAIN OR LOSS--CTBS VOCABULARY NCE													
	GROUP 1	3374	-10.0047	14.775	0.254	1.17	0.000	0.39	16688	0.696	0.41	5547.65	0.682
	GROUP 2	13316	-10.1232	15.988	0.139								
P2NCE PRE T--CTBS COMPREHSN NCE													
	GROUP 1	4301	52.2506	16.143	0.246	1.09	0.000	-4.85	22567	0.000	-4.99	6693.82	0.000
	GROUP 2	18268	53.6271	16.878	0.125								
T2NCE POST T--CTBS COMPREHSION NCE %TILE SCR													
	GROUP 1	5554	47.2928	17.305	0.232	1.12	0.000	-7.99	30603	0.000	-8.28	8530.23	0.000
	GROUP 2	25051	49.4403	18.295	0.116								
D2NCE GAIN OR LOSS--CTBS COMPREHENSION NCE													
	GROUP 1	4272	-5.7219	15.670	0.240	1.10	0.000	-2.43	22471	0.015	-2.51	6665.98	0.012
	GROUP 2	18201	-5.0477	16.464	0.122								

- T - T E S T -

GROUP 1 - PERFORM EQ 1.
GROUP 2 - PERFORM EQ 2.

VARIABLE		NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	F VALUE	2-TAIL PROB.	POOLED VARIANCE ESTIMATE T VALUE	POOLED VARIANCE ESTIMATE DEGREES OF FREEDOM	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	SEPARATE VARIANCE ESTIMATE T VALUE	SEPARATE VARIANCE ESTIMATE DEGREES OF FREEDOM	SEPARATE VARIANCE ESTIMATE 2-TAIL PROB.
P1NCE	PRE T CTBS VOCABULRY NCE												
	GROUP 1	1205	51.6797	14.171	0.408	1.39	0.000	-3.57	6763	0.000	-3.97	2000.25	0.000
	GROUP 2	5560	53.5293	16.716	0.224								
T1NCE	POST T CTBS VOCABULRY NCE												
	GROUP 1	1441	40.7044	16.035	0.422	1.08	0.053	-1.04	7884	0.297	-1.07	2193.98	0.285
	GROUP 2	6445	41.2079	16.696	0.208								
D1NCE	GAIN OR LOSS--CTBS VOCABULARY NCE												
	GROUP 1	1203	-9.9235	12.618	0.364	1.27	0.000	3.84	6716	0.000	4.14	1927.79	0.000
	GROUP 2	5515	-11.6263	14.218	0.191								
P2NCE	PRE T--CTBS COMPREHSN NCE												
	GROUP 1	1205	48.9801	13.313	0.384	1.36	0.000	-4.55	6763	0.000	-5.02	1978.89	0.000
	GROUP 2	5560	51.1685	15.505	0.208								
T2NCE	POST T--CTBS COMPREHSION NCE %TILE SCR												
	GROUP 1	1440	40.7903	14.060	0.371	1.30	0.000	-5.09	7902	0.000	-5.54	2351.72	0.000
	GROUP 2	6464	43.1207	16.051	0.200								
D2NCE	GAIN OR LOSS--CTBS COMPREHENSION NCE												
	GROUP 1	1202	-7.0291	11.332	0.327	1.41	0.000	0.70	6728	0.484	0.78	2009.18	0.434
	GROUP 2	5528	-7.3213	13.455	0.181								